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Tower Motor Truck Company
Greenville Michigan











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HYATT ROLLER BEARING COMPANY, New York, N. Y.

HYATT BEARINGS FOR TRAILER TRUCKS

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TRANSFER & STORAGE

PUBLISHED ON THE FIRST OF EACH MONTH BY THE CLASS JOURNAL CO.

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In a retrospection over the advancement in business during the past decade, it is not easy to bring to mind any agent that has contributed more to quicken agricultural, industrial, and commercial activity and to increase the prosperity of every community than the motor truck.

Yet, in a reminiscence over the achieve-

ments that have signalized the commencement of record-making events in motor truck transportation during the past ten years, it is difficult to find anything that has been more notable and commanding than the profound influence created by the Standard Trucks developed and built by Mr. Albert Fisher.

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From his twenty long years of experience in building carriages and wagons Mr. Fisher was convinced that a motor truck built wholly of standard parts, properly designed and properly put together, was the coming vehicle. It was with this idea that he developed the Standard Motor Truck Company.

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Standard Trucks from the very source to the final disposition of power.

The advantages, to be derived by users, of using Standard parts throughout are, Mr. Fisher believes, that a standard part is simple—that it can be easily taken off or put on-that trucks can be serviced more quickly because the parts are interchangeable—and that the knowledge of how to take care of a standard part is widespread. This results in repairs be-

ing speeded up, lay-ups reduced, and time and money saved to owners.

Naturally, by being built to these ideals, Standard trucks were bound to be set out as trucks that are practical, reliable, efficient, and endurable. This, no doubt, is the reason why thousands of Standard users, in every kind of business, have found the truck so serviceable that they say the Standard is "All The Name Implies."

STANDARD MOTOR TRUCK COMPANY, Detroit, Michigan



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OFFICE AT NEW YORK, NEW YORK, UNDER THE ACT OF MARCH 3, 1879.

Volume XX

NEW YORK, JANUARY, 1921

No. 1

THE DECEMBER CONVENTIONS

What's What in This Issue and Where to Find It

AMERICAN WAREHOUSEMEN'S ASSOCIATION Standardization—Storers and Shippers Agree on a Uniform "Receiving Report" or "Report of Condition"..... Warehouse Receipts—For Collateral Use the Non-negotiable Receipt in the Name of the Banker Is Recommended to Financial Port Warehouses-Government Methods of Disposing of Army Storage Plants a Menace to the Warehouse Industry 16 Elections—These Give the Central West Stronger Influence..... 20 Labor—The Open Shop Is Indorsed by A. W. A. and N. F. W. A. . . . 22 Committee Reports—Summaries of Proceedings and Speeches.... 23 Central Bureau—Reports of Committees on Standardization of Basis for Rates...... NATIONAL FURNITURE WAREHOUSEMEN'S ASSOCIATION Proceedings—Story of the Discussions, With Summaries of Reports 54 Labor—The Open Shop Is Indorsed by N. F. W. A. and A. W. A. . . . 22 AMERICAN CHAIN OF WAREHOUSES Proceedings—Story of the Convention.....

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(Editorial Note.—Owing to the convention reports, several of our usual departments, together with a number of articles which were to have appeared, have been crowded out from this month's issue.)

FIRST STANDARDIZED FORM:

"REPORT OF CONDITION" or "Receiving Report"

Is Agreed Upon by Warehousemen and Shippers

An A. W. A. Convention Development

Bu KENT B. STILES

UT of the co-operative movement between warehousemen and shippers there has been produced a standardized form which apparently will find universal favor among storage executives and the manufacturers' traffic representatives who handle warehouse accounts.

This standardized form—tentatively called a receiving report but which may become known as a "report of condition"—was presented to the American Warehousemen's Association here to-day at its thirtieth annual convention after the form had been worked out in conference by committees representing the A. W. A. and the Shippers' Warehousing and Distributing Association.

Shipper to Supply Forms

Under the plan which would be adopted to bring the form into general use in the business of merchandise warehousing, copies of the form would be supplied by the shipper. They would be utilized, in duplicate or triplicate or even in larger number at option, by the shipper to send notice to the warehouseman of the expected arrival of goods at warehouse. One of the copies thus supplied to the warehouseman would be returned to the shipper and would serve to give the shipper information as to time of arrival and condition of goods.

The conference between warehousemen and ship-

rival and consen and shipmembers

A COPY of the "report of condition" form or receiving report as worked out in committee conference is shown on page 9. It may be subject to slight changes before copies of it are distributed and it is put into use. How does it operate? To quote John Simon, president of the Shippers' Warehousing and Distributing Association, and who headed the shippers' committee at the conference:

"After many weeks of diligent effort on the part of our standardization committee, of which John Wilson, distribution manager of the Hygienic Products Co., ChiWHITE SULPHUR SPRINGS, W. VA., Dec. 10. pers occupied an entire day, and the storagemen's committee to-day recommended to the American Warehousemen's Association that its members adapt the standardized form to their business in instances where that business is carried on with a member of

the Shippers' Warehousing and Distributing Association

Recommendation to Chain

The chairman of the warehousemen's committee which made this recommendation is Alton H. Greeley of Cleveland. Mr. Greeley also is president of the American Chain of Warehouses, and he stated that the Chain members would be asked to adopt the form in their business relations with members of the Shippers' Warehousing and Distributing Association.

On behalf of the Shippers' Warehousing and Distributing Association a campaign will be carried on, both within the organization and without, to have shippers generally adopt the form. It was conceded at the conference here that, while the form was considered highly practical and undoubtedly adaptable, propaganda work would be necessary among both warehousemen and manufacturers to effect widespread use of the form. This propaganda effort the Shippers' Warehousing and Distributing Association is prepared to make. The first step will be to have members of that organization supplied with copies.

STANDARDIZATION

COMMITTEES representing the American Warehousemen's Association and the Shippers' Warehousing and Distributing Association in conference at White Sulphur Springs worked out a standardized "receiving report" or "report of condition."

A copy of the report is reproduced on Page 9.

Read this story telling how and why the adoption of this report universally by warehousemen is recommended by men who represented the storage industry at the White Sulphur Springs conference.

cago, is chairman, this form is believed to be something simple and satisfactory for use by warehousemen and shippers.

"The form is to be used by the warehouseman for the purpose of reporting the receipt of cars. It is issued in duplicate, or triplicate, or in larger number, by the shipper. The original copy is returned by the warehouseman to the shipper. The duplicate or duplicates are kept by the warehouseman for his permanent records or such other use as he may care to make of them for his car man, floor man, etc.

"Sufficient space has been pro-

Mr. Warehouseman: Mr. Shipper:

HERE IT IS! USE IT!

REPORT OF CONDITION

						ed By Warehouse Receip	7
							No
City							Date Shipped
For							Lot No
From]	R. R. W	ay-Bill	dated a	nd number	Freight Bill No
Warehouse 1	*				or No		SideEnd
ckages Received	Gross	2000					
o. of Kind of	Gross Weight	Over	Short	Good	Bad	(Recondition Report to Follow)	Remarks
		Over	Short	Good	Bad	(Recondition Report to Follow)	Remarks

This is the "Report of Condition," or "Receiving Report," recommended to the members of the American Warehousemen's Association, the American Chain of Warehouses and the Shippers' Warehousing and Distributing Association in business between warehouseman and distribution manager. Subject to slight revision, its use by manufacturers and storage executives universally will be urged in a campaign to be carried on by the Shippers' Warehousing and Distributing Association. How this form—the initial one in the movement to standardize forms—operates is told in the story on these pages.

vided for the warehouseman to list all the items contained in each car. It is the intention to use only one set of forms for each car received. When the shipper sends out a car he will list plainly, on the form, the items as contained in the car. The set of forms for this car goes to the warehouseman and it will then be necessary for the warehouseman only to check the list carefully with contents of car and, if found to agree, then to fill in the section number and other information as requested on the form, sign the original copy, and return latter to the shipper."

It was brought out that while

the form itself is in phraseology about that shown in the reproduction shown above, shippers individually may desire one or two additional items inserted to fit their particular business needs. These could be inserted when the forms were printed. The plan is for each traffic manager who decides

VOID

					reight Bill No
		Floor No.	. (North South	East West
-	Commodity	CONDITION Good Bad	Balvaged	Not Loss	In Shipping Condition
	-		Short Connective CONDITION	Short Connection CONDITION Shored	Lot No

This form is not for use. It is printed here solely for comparative purposes. It is the one tentatively prepared by the standardization committee of the Shippers' Warehousing and Distributing Association. Discussions at While Sulphur Springs showed the warehousemen's need for changes, and the revised form is reproduced on page 8

to adopt the form to have his firm's name and address printed on the copies supplied to him.

The all-day committee conference yesterday was participated in by the following:

Representing the warehouse in-

Alton H. Greeley, president, Cleveland Cartage & Storage Co., Cleveland; president of the American Chain of Warehouses; chairman of the committee on uniforms and practices of the A. W. A. merchandise sub-division.

George S. Lovejoy, manager, general store department, Quincy Market Cold Storage & Warehouse Co., Boston.

T. E. Witters, general manager, Baltimore Fidelity Warehouse Co., Baltimore; chairman of the Central Bureau committee of the A. W. A. merchandise sub-division.

L. T. Crutcher, president, L. T. Crutcher Warehouse Co., Kansas City; director, A. W. A.

William E. Halm, president, New York Dock Co., New York City.

P. F. Cassidy, Chicago, western

representative of the American Chain of Warehouses.

Frank Rochambeau, F. C. Linde Co., New York City; secretary of the American Chain of Warehouses.

W. A. Sammis, secretary and manager, Central Storage Co., Kansas Citv.

Roy C. Griswold, president, Griswold & Walker, Inc.; director, A. W. A.; president, Illinois Association of Warehousemen.

Edward Wuichet, president, Lincoln Fireproof Storage Co., Dayton, Ohio.

Robert L. Spencer, superintendent, Duquesne Warehouse Co., Pittsburgh.

Arthur P. Jones, president, Jones & Co., Inc., Norfolk, Va.

Representing the manufacturers:
John Simon, manager, transfer department, Keystone Steel & Wire Co.,
Peoria, Ill.; president, Shippers'
Warehousing and Distributing Association.

John J. Sinnott, traffic manager, F. F. Dalley Corps., Ltd., Hamilton, Canada.

C. G. Yates, traffic manager, Vick Chemical Co., Greensboro, N. C. E. G. Hamel, traffic manager, Jiffy Dessert Co., Waukesha, Wis.

J. V. Muller, traffic manager, Roessler & Hasslacher Chemical Co., New York City.

The Conference

A T the suggestion of Mr. Greeley, who presided, Mr. Simon opened the conference between warehousemen and shippers by sketching briefly the origin and growth of the Shippers' Warehousing and Distributing Association. In his talk Mr. Simon emphasized that the association entertained no policy of having warehouses cut rates. "If we can get service we are willing to pay the rates," he said.

Alluding to service, Mr. Hamel told how the Jiffy Dessert Company sent a letter to the warehousemen of Minneapolis, St. Paul and Duluth. One responded immediately and received the company's business. One warehouseman delayed ten days before responding. "Prompt answers make a wonderful impression on the traffic manager," Mr. Hamel commented.

It was brought out that the "receiving report" or "report of condition" would serve first as a manifest of car when sent by shipper to warehouseman; and second as a notice of receipt when returned by warehouseman to shipper.

Revision

The report as originally prepared by the shippers' standardization committee is reproduced on this page. Comparison of the two will show that the conference worked out a number of changes, these being suggested by the warehousemen and agreed to by the shippers. One of the changes was the substitution of "side" and "end" for "north," "south," "east" and "west."

Mr. Lovejoy stressed that warehousemen are responsible under the warehouse receipts act and declared that the proposed report, practically the invoice of the goods, should be accompanied by the bill of lading.

Some of the major suggestions advanced were as follows:

That the form be of letterhead size, with a view to eliminating administrative expense for both warehouseman and shipper.

That some warehousemen, if they desired, could use the form as a non-negotiable receipt, and that those who are accustomed to give a receipt for every lot could continue to do so at their own option.

That the warehouseman, if he wished to do so, could include on the report his charges, these being written in one corner; this practice could be followed by warehousemen who now send an individual bill for each shipment.

Restrictions on Reverse

That instructions could be printed on the back of the form to indicate the various uses to which it could be put, such as one for warehouse record, one for warehouse floor man, one for car man, one to return to shipper, etc.

Shippers' representatives said the use

of the form universally would save more than \$2 a car for shipper alone and should cut down the warehouseman's expenses. Warehouse efficiency and promptness would be increased, shippers declared.

It was brought out that using the form would not interfere with the warehouseman keeping his own damage and shortage records. The form would serve to bring to the shipper's immediate attention the existence of shortage or overage and the shipper could avoid delay in making inquiry at his own plant as to the reason. It was emphasized that the overage and shortage phase of the form should eliminate possibility of collusion between checkers and other warehouse employes.

It was moved by Mr. Lovejoy and seconded by Mr. Witters that the warehousemen's committee recommend to the American Warehousemen's Association the adoption of the form in relations between A. W. A. members and members of the Shippers' Warehousing and Distributing Association.

Warehouse Order Withdrawn

ON this page is reproduced another form, "Warehouse Order." This was brought to the convention by the shippers' committee and was to have been recommended, subject to revisions to meet warehousing needs. Discussion of the "report of condition" form, however, occupied the entire day, and the committees agreed that probably an equally lengthy conference would be required to effect necessary changes in the "warehouse order" form. Accordingly the latter was withdrawn from consideration at this time, to be taken up in the future between shippers and a committee expected to be appointed to represent the A. W. A. in the standardization work.

Mr. Greeley's Report

AT the A. W. A.'s concluding session to-day Mr. Greeley presented a report of the conference. He read a list of the members of the Shippers' Warehousing and Distributing Association, which, he declared, "prefers good service with higher rates than no service with lower rates." He emphasized that promptness by the warehouseman at all times was a fundamental of good service. He said the shippers had asked that the order number always be placed on the bill of lading, and that it was important for the warehouseman to avoid delay in sending back the bill of lading and reporting arrival and condition of goods.

"Your committee feels," Mr. Greeley said, in telling about the "report of condition" form, "that this is an initial step in placing before you a standard set of uniform forms harmonious to the various industries represented in the Shippers' Warehousing and Distributing Association."

Not a Receipt

The "report of condition" form was in no sense a warehouse receipt and should not be considered as such, Mr. Greeley

Address				1	Our No
	QUANTITY	COMMODITY	WEIGHT	SERIAL No.	TO THE JOBBER. No delivery can be ma unless the entire set of three is taken to the warehouse.
			Distributing Assoc	iation. Headquarters, 1	30 N. Wells St. Chicago

			/.	Floor
QUANTITY	COMMODITY	WEIGHT	SERIAL No.	TO THE WAREHOUSE CO
				Retain Number 1 for you files, and give Number 2 to the teamster.

Return this completed copy to us at close of day's business.	Address				3	Order No
		QUANTITY	COMMODITY	WRIGHT		copy to us at close of

The Shippers' Warehousing and Distributing Association was to have presented the above form for discussion with warehousemen at White Sulphur Springs but by agreement it was withdrawn and will receive future consideration

declared. The question was here brought up as to whether it might not be so considered in the courts, and some speakers declared that the return of the original copy to the shipper should be followed by a non-negotiable receipt. Suggestions were made that "This is not a negotiable warehouse receipt," or "Non-negotiable" or "This is not a warehouse receipt and is not negotiable" or "Warehouse arrival report" be made a text on the form. It was finally decided that the heading should read "Report of Condition—To Be Followed By Warehouse Receipt."

As part of his report to the convention Mr. Greeley read the summary of resolution which had been adopted by the Shippers' Warehousing and Distributing Association. This summary follows:

"A committee of the Shippers' Ware-"A committee of the Shippers' Ware-housing and Distributing Association held conferences at White Sulphur Springs on December 9 with Alton H. Greeley and his committee representing the American Warehousemen's Associa-tion. Following this conference, the Ship-pers' representatives adopted a resolution suggesting that the American Warehousemen's Association appoint a permanent committee to work with a committee of the Shippers' body in discussions of problems which are of common interest to manufacturer and warehouseman.

Shippers' Appreciation

"It is anticipated both by the shippers and by Mr. Greeley and the men who were associated with him at the conference that many such problems will arise from time to time which require discussions of this character.

"The Shippers' representatives, in pre-senting herewith the summary of its re-

solution, desire on behalf of the Shippers' Warehousing and Distributing Associa-Warehousing and Distributing Associa-tion to express their appreciation of the splendid spirit of helpfulness shown by the warehouse industry in co-operating to accomplish the objects for which the Shippers' association was organized. "The committee of the Shippers' Ware-

housing and Distributing Association takes this opportunity to express to the American Warehousemen's Association its sincere appreciation for the courtesies and hospitality extended to them at

this convention."

T has long been conceded that standardization of forms will be a difficult task. Mr. Greeley emphasized it in his report to the convention as chairman of the merchandise sub-division's committee on uniform forms and practices. During the year this committee obtained opinions of representative warehousemen and these opinions are set forth in part in the Greeley report. They show that many warehousemen believe that the forms they are themselves using are the ideal ones, fitted to be accepted as standardized ones; other opinions indicate belief that one difficulty of attaining standardization is that forms and practices adaptable to one community would not be acceptable to another, and that size of business and variety of commodities handled must necessarily be factors. The Greeley report says, however:

"Your committee is of the opinion that the future does hold out some very bright prospects and that a further study of the subject should continue. The committee suggests, however, that the subject is one presenting many difficult features,

with the possibility of satisfactory results in time, and that if the subject is one of sufficient importance to the warehouse industry, on account of the intensive study necessary in comparing the great variety of forms of the various members, the making of a chart, the attendance at meetings before a committee, etc., that a competent secretary be placed at the disposal of the committee for a period of three months, or less if the work can be compiled in a shorter time, in view of making a survey of the forms used by our members and the selection of a uniform set of forms to be later printed and approved at the next annual meeting of this Association. Your committee believes that by such a plan it will be possible to put the scheme into practical use at an earlier moment than will otherwise be possible."

Print Shops Suggested

The report declares that if a set of standardized forms is adopted there should be designated print shops in various parts of the country where stocks of forms could be kept in blank, so warehousemen could order by numbers, with their names inserted. The report con-

"Your committee recommends that all members standardize their warehouse receipts at once, using blue paper 6½ inches wide and 8 inches long for the negotiable receipt and the same size but printed upon white paper for the nonnegotiable receipt, the wording in each case to conform to the uniform warehouse receipts act of 1908."

Non-Negotiable Warehouse Receipt For Collateral Use

Is Recommended by Warehouse Industry to Financial America

OR collateral use in the business relations between the storage and banking industries the non-negotiable warehouse receipt, in the name of the banker, as compared with the negotiable form, is to be recommended by the American Warehousemen's Association. A strong campaign will be carried on by the A. W. A. among bankers, shippers and warehousemen in behalf of the non-negotiable form.

It was not without some opposition that the A. W. A. to-day at its thirtieth annual convention here voted in favor of recommending the non-negotiable instrument. Negative arguments were presented, notably one by Samuel M. Woodson of Kansas City, who insisted that in instances where bankers desired to rediscount their paper the negotiable form of receipt WHITE SULPHUR SPRINGS, W. VA., Dec. 10.

was the preferable. Mr. Woodson, in urging what he declared would be "a precautionary action to call the situation to the banker's attention," suggested that the following text be added to the clause of the A. W. A.'s recommendation favoring the non-negotiable

"However, should the banker intend to rediscount his paper with the warehouse receipt as collateral, the negotiable form of receipt is necessary."

Mr. Woodson's suggestion was made as a formal motion and after some discussion it was voted down, seventy-two to thirty-one. When the balloting was taken on the proposal to recommend the non-negotiable form, the approval was overwhelming, there being only a few scattered opposing votes.

THE recommendation favoring the non-negotiable receipt will go to bankers, shippers and warehousemen as part of a document entitled "Warehouse Receipts as Collateral," which William E. Halm, president, New York

is published in part on these pages. The original of this document was prepared by the A. W. A. committee on banks and warehouses-chairman,

Dock Co., New York City; M. C. Cummings, Chicago Cold Storage Warehouse Co., Chicago; Alton H. Greeley, General Cartage & Storage Co., Cleveland; Tarrant P. King, Northern Avenue Stores & Docks Corp., Boston, and W. Fred Richardson, W. Fred Richardson Security Storage Corp., Richmond, Va.

Discussions and committee conferences at the convention here developed the desirability of a number of changes in the text. Revisions have been made and the document in its final printed form will be distributed in various ways among the industries which it is desired to reach. The situation will be explained also at the next convention of the American Bankers' Association, under a motion adopted to-day.

The committee on banks and warehouses, in its report presented on Wednesday through Mr. Halm, recommended distribution of "Warehouse Receipts as Collateral" among members of the American Bankers' Association in order to give bankers concise information regarding warehouse receipts and in order also that the bankers might get a better idea of the character and stability of the warehouse industry.

Revision Suggested

Frank A. Horne, New York, said the fundamental idea of distribution was fine, but that some statements in the document were somewhat misleading and accordingly there ought to be revisions. He said there should be the most careful legal opinion obtained before any statements should be circulated among bankers as coming from the A. W. A., and he urged that the document be referred back to the committee on banks and warehouses for consultation with the committee on laws and legislation, and possibly for consultation also with Barry Mohun, a legal authority on warehousing.

Mr. Halm explained that the document had had the benefit of the counsel of both Prof. Williston, of Harvard, who helped frame the uniform warehouse receipts act which has become law in nearly all the States, and Thomas B. Paton, general counsel for the American Warehousemen's Association

ciation.

Mr. Horne's motion was opposed by Samuel G. Spear of Boston, who said it was not necessary to have a lawyer's opinion at this time; the document was, he declared, snappy, brief and of the character which would be read without being thrown into the wastebasket. Later, he thought, a more exhaustive examination could be made and legal opinion sought if necessary.

W. I. Ford of Dallas said the document should be so phrased that the A. W. A. could stand behind every statement. He questioned whether it was the best advice to recommend the nonnegotiable form of receipt as collateral—"the A. W. A. should ponder before deciding."

Mr. Halm said that those warehousemen who advised their bankers to use the non-negotiable form saved themselves a lot of money, and he believed the bankers themselves would subscribe to that point.

It was here that Mr. Woodson inter-

THE WAREHOUSEMAN AS A BANKER OF GOODS

THE American Warehousemen's Association at its White Sulphur Springs convention took the following steps to co-operate with the American Bankers' Association:

1. Recommended, for collateral use, "the non-negotiable warehouse receipt in the name of the banker, as compared with the negotiable form."

2. Issued a document under the title "Warehouse Receipts as Collateral," which will receive wide distribution among bankers, shippers and warehousemen.

3. Decided to devise a new and expanded form of warehouse receipt, with restrictions designed to protect warehousemen's interests. This new form may later be discussed in conferences attended by representatives of the American Bankers' Association and the American Warehousemen's Association.

4. Voted to send a representative to the next convention of the American Bankers' Association to place the document "Warehouse Receipts as Collateral" before that body.

5. Adopted report submitted by its Committee on Banks and Warehouses advocating a general plan to acquaint the banking world with the stability of American warehousing as an institution for banking the nation's goods.

......

posed his first objection to recommending the non-negotiable form. The cry over the country is for expansion rather than restriction of credit, Mr. Woodson asserted, and adoption of the non-negotiable instrument might have a tendency to restrict credit and achieve results not anticipated by those who favored the non-negotiable.

Further discussion brought out opinion by some of the members that it would be "unfortunate" if the A. W. A. recommended either form of receipt, as both were "immensely useful." This contention was advanced by Albert M. Read, of Washington, D.

C., chairman of the A. W. A. committee on laws and legislation, who declared that any inaccuracies in the document would convey to the bankers a wrong idea of the value of both forms of instrument. "Whatever is done on behalf of the A. W. A. should be as stringent as the law itself," he said.

W. B. Mason of Providence, favoring adoption of the Halm document, said it was in itself an excellent primer—not an authority, perhaps, but "a help to every warehouseman in his business."

It was apparent here that a deadlock had been confronted and as it was the noon hour, James F. Keenan of Pittsburgh, retiring president, called adjournment and expressed a persuasively-worded intimation that the opposing sides might get together during luncheon and come to an understanding. When the afternoon session was resumed it was found that another Keenan hunch had run true to form. The difficulty was solved for the time. being by a motion presented by John L. Nichols, of Boston, that the Halm document be submitted to the Halm and Read committees for joint consideration, "with positive instructions to report Friday."

Agreement

The report Friday (to-day) showed that the two committees had arrived at a unanimous decision as to the changes which should be made in the text of the Halm document and that there had not been such great differences of opinion as there had seemed to be at Wednesday's session. The two committees reported they believed the convention would indorse these revisions but that it was desirable that separate votes be taken-one on whether the report of the Halm committee should be indorsed, recommending that the A. W. A. favor the non-negotiable receipt for collateral use; the other on the Halm document, "Warehouse Receipts as Collateral," which contains a clause to the same

Here Mr. Woodson opposed the A. W. A. recommending the non-negotiable, on the ground that many banks preferred the negotiable instrument. "The negotiable form is a record in itself," Mr. Woodson declared. "This is a matter which should be taken up with the American Bankers' Association and with the Federal Reserve Bank at Washington."

Edwin Morton, New York City, said the A. W. A.'s recommendation would in no sense be mandatory nor was it in opposition to the negotiable form; it was "up to the interested parties to use either." But "for the

convenience of the warehouseman," he declared, the A. W. A. should recommend the non-negotiable.

Many storers were unable to locate the negotiable receipts, R. H. Switzler of St. Louis said, and by using the non-negotiable form the warehouseman could avoid many difficulties. He declared the non-negotiable "appeals to the customer and avoids considerable loss."

After the defeat of Mr. Woodson's motion to the effect that the negotiable instrument should be considered necessary should the banker wish to rediscount his paper with the warehouse receipt as collateral, the revised Halm document was adopted, with a few opposing votes. The report of the Halm committee was then adopted.

Several other motions were adopted—one by Mr. Halm that distribution of the document be through Charles L. Criss of Pittsburgh, general secretary; through local associations of warehousemen, and by mail and personally by members, in order to reach bankers, and by members in order to reach shippers. Another, by James A. Perkins of Albany, N. Y., that Mr. Halm attend the next meeting of the American Bankers' Association and place the document before that body.

To Revise Receipt

Another motion adopted was one by Mr. Halm that a new and expanded form of warehouse receipt be devised. The form as agreed upon some years ago by the A. W. A. and the American Bankers' Association was made very little use of, Mr. Halm said, and nearly every member finds it necessary to add texts.

Under Mr. Halm's motion, committees from the merchandise, cold storage and household goods sub-divisions will endeavor to revise the receipt, and these committees will submit their revision to the committee on banks and warehouses, which would place it before the American Bankers' Association. The general purpose would be to have the receipt contain restrictions designed to protect the warehouseman's interests.

On this last point it was remarked by Mr. Read that the difficulty lay with the members themselves—in their reluctance to use the present form of receipt without writing in matters of law which they believed would act as buffers against losses, in court. "There are too many whereases and reservations desired by warehousemen," said Mr. Read; "the banks ought not and will not accept them."

It was brought out on behalf of the household goods warehousemen that "it would never be possible to get up an acceptable receipt to cover both household goods and merchandise," although one could be devised to cover merchandise and cold storage.

The document "Warehouse Receipts as Collateral" contains, in addition to

"OUR INTEGRITY IS YOUR SECURITY"

SUCH is the message which the warehouse industry would convey to the bankers of America. It is the basic idea of the foreword in "Warehouse Receipts as Collateral," a document which the American Warehousemen's Association will distribute among bankers as an exposition of warehouse receipts as used for collateral. This foreword reads:

"As the country grows, its natural resources become more thoroughly developed and the population and business of our cities increase, the problems of distribution become greater. Seasonal accumulations of raw products and manufactured articles must be spread over the period of consumption. The products of one portion of the country must be readily available for the use of the entire nation. In these problems the storage warehouse industry is playing an increasingly important part.

"There will ever be a close tiebetween the banker and the storage warehouseman; both guard the wealth of others, the former as the custodian of funds and the latter as the custodian of goods. Each must jealously protect his reputation for integrity and responsibility.

"Goods deposited with storage warehousemen must in many cases be financed through the medium of warehouse receipts as collateral. This pamphlet has been prepared by the American Warehousemen's Association for the ready reference and convenience of its members and those of the American Bankers Association in an effort to furnish a clear and concise exposition of warehouse receipts as used for collateral."

an exposition of warehouse receipts as used for collateral, a number of sections of the uniform warehouse receipts act; sections of the general business law which relate to warehousemen, and a list of the A. W. A. members. These features are omitted here. The exposition reads:

Warehouse Receipts. A warehouse receipt is an acknowledgment of the warehouseman that he has received on storage certain goods which will be delivered on demand, provided the terms of the receipt are complied with.

"The Uniform Warehouse Receipts Act specifies two distinct forms of warehouse receipt, negotiable and non-negotiable. Each form has a separate function. Whether it be of the negotiable or non-negotiable form, each warehouse receipt must, in accordance with the law specify:

- (a) The location of the warehouse
- where the goods are stored.

 (b) The date of issue of the receipt.
- (c) The consecutive number of the
- (d) A statement whether the goods received will be delivered to the bearer, to a specified person, or to a specified person on his order.
- (e) The rate of storage charges.
 (f) A description of the goods or of the packages containing them.
- (g) The signature of the warehouseman, which may be made by his authorized agent.
- (h) If the receipt is issued for goods of which the ware-houseman is owner, either solely or jointly or in common with others, the fact of such ownership, and

 (i) A statement of the amount of
- (i) A statement of the amount of advances made and of liabilities incurred for which the warehouseman claims a lien. If the precise amount of such advances made or of such liabilities incurred is, at the time of the issue of the receipt, unknown to the warehouseman or to his agent who issues it, a statement of the fact that advances have been made or liabilities incurred and the purpose thereof is sufficient.

"The warehouseman, however, incurs liability for the omission for the foregoing on negotiable receipts only.

Forms Differ

"The two forms of receipts differ in actual use chiefly as to the manner in which right of possession of the goods covered by the receipts may pass from one party to another, and the manner in which delivery of the goods can be effected.

"Negotiable Warehouse Receipts. A negotiable receipt may pass from hand to hand merely by endorsement in much the same manner as any other negotiable instrument. Right of possession of the goods covered by a negotiable receipt follows the ownership and possession of the receipt. Lawful delivery of goods covered by a negotiable warehouse receipt cannot be made without the surrender of the receipt properly endorsed. Care must be exercised by the holder of a negotiable receipt that it be not lost, misplaced or destroyed.

"Non-Negotiable Receipts. The surrender of a non-negotiable warehouse receipt is not required by law. Delivery of goods covered by such a receipt, or transfer of the right to delivery on the books of the warehouseman, is accomplished through the written order of the party in whose name the goods are stored. Non-negotiable receipts must be so marked. Failure so to do may require the warehouseman to treat such receipts

as negotiable.

"Warehouseman's Lien. The warehouseman's lien for charges, advances, etc., may be enforced against all goods, whenever deposited, if stored under a non-negotiable receipt but the lien is specific under a negotiable receipt which must state charges for which the lien is claimed.

Adaptability

"Adaptability of the Negotiable Warehouse Receipt. A negotiable warehouse receipt permits transfer of right of possession by mere endorsement. The negotiable receipt by reason of the ease of negotiation has certain distinct advantages which do not obtain in the case of nonnegotiable receipts. A banker may, with reasonable safety, accept as collateral a duly endorsed negotiable receipt issued by a reputable warehouseman, provided he is satisfied with the endorsements and is sure that the goods are as represented. Care should, of course, be exercised to see that storage charges and other liens are fully paid through having receipted bills of the warehouseman filed with him monthly. In case the borrower desires to take delivery of a portion of the goods covered by a negotiable receipt it is necessary to either present the receipt to the warehouseman in order that there may be noted upon it the release of the quantity delivered, or surrender the original receipt and obtain a new one for the goods remaining undelivered.

"Adaptability of the Non-Negotiable Receipt. When money is to be loaned on goods in storage and the banker obtains a non-negotiable receipt in his own name, the goods are under his sole control. In such a case the warehouseman will not permit delivery, or even inspection, of the goods without the written authority of the banker. In case the borrower is involved in litigation an attachment of the goods will not prevail as long as the receipt is in the name of the banker. The banker assumes no liability or diminution of security in the event of loss, misplacement or destruction of such a receipt, since the goods cannot be released without his written order. Partial deliveries can be made merely on the written order of the banker. Most of the warehousemen of the country issue non-negotiable receipts in exchange for negotiable receipts, or transfer goods covered by a non-negotiable receipt to another party, without making a charge for the additional non-negotiable receipt required.

"Recommendation. For collateral use the American Warehousemen's Association recommends the non-negotiable warehouse receipt in the name of the banker as compared with the negotiable form.

"Delivery Orders. In addition to the return of the negotiable receipt for complete delivery or endorsement of partial delivery, signed delivery orders are required by the warehouseman regardless of the form of the warehouse receipt. Delivery orders do not require any particular form, but care should be taken to see that they specify to whom the goods

are to be delivered, the location and description of the goods as stated in the receipt and the number of the receipt. The warehouseman is not obligated to deliver until his lien for storage and other charges is satisfied.

"Transfer Orders. When the right of possession of goods covered by a warehouse receipt is to be transferred on the books of the warehouseman, a signed transfer order is required. Such orders differ from delivery orders only to the extent that they refer to the transfer, rather than the physical delivery, of the goods. Transfer orders should contain the same information as the delivery order, and, to be effective, all liens of the warehouseman must be satisfied. Frequently transfer orders are held for a considerable period by the party in whose favor they are made; to avoid liability for additional charges, persons issuing transfer orders should state on the orders that all charges accruing subsequent to the date of the order are to be paid by the trans-

Co-operation Promised

"Co-operation. The American Warehousemen's Association is at all times ready and willing to co-operate to the extent of its ability in aiding bankers in matters pertaining to warehouse receipts, or general warehousing problems.

"Uniform Warehouse Receipts Act. The attention of bankers is especially directed to certain portions of the Act as reprinted in the following portions of

this pamphlet:

"Section 100-Lost or Destroyed Receipts. This section refers solely to negotiable receipts. As in the case of most negotiable instruments, the custom is to require a surety bond in an amount equal to twice the value of the goods covered by the receipt. It should be carefully noted that no such restrictions apply in

the case of non-negotiable receipts.

"Section 118—Satisfaction of the Warehouseman's Lien by Sale. Occasionally difficulty arises through the necessity of prompt sale of goods by the ware-houseman. When a negotiable receipt houseman. When a negotiable receipt has passed through several hands by en-dorsement and has been hypothecated by the last endorser it is sometimes impossible to advise the banker of the action

NEW BUSINESS

ONE way to get it is to show the shipper, through comparative figures, how he can more economically store his goods in your warehouse rather than by leasing space outright in a private building and paying extra charges for labor, insurance, etc.

This revenue-earning method of selling the shipper on the idea of utilizing the public warehouse has been successfully followed by the Currier-Lee Warehouse Co., Chi-

The story will be told in a coming issue of Discibution & Warehousing.

about to be taken. Obviously such a condition could not obtain in the case of a non-negotiable receipt.

Delivery of Goods

"Section 110—Attachments or Levy Upon Goods for Which a Negotiable Receipt Has Been Issued.
"Section 124—Who May Negotiate a

Receipt.

"Section 125—Rights of Persons to Whom a Receipt Has Been Negotiated. "Section 126—Rights of Person to Whom a Receipt Has Been Transferred.

"Section 127—Transfer of Negotiable Receipt Without Endorsement. "Section 128—Warranties On Sale of Receipt.

"Section 129-Endorser Not a Guaran-

"Section 130—No Warranty Implied From Accepting Payment of a Debt.
"Section 131—When Negotiation Not Impaired by Fraud, Mistake or Duress.
"Section 132—Subsequent Negotiation.
"Section 133—Negotiation Defeats Vendor's Lien. The above sections referenced by the negotiable receipt and are solely to the negotiable receipt and are commended to the careful attention of bankers who accept negotiable receipts

as collateral.

"Section 138—Delivery of Goods With-out Obtaining Negotiable Receipt. This section specifies a distinct penalty for delivering goods covered by a negotiable receipt without the warehouseman first obtaining possession of the receipt. Not infrequently bankers, not wishing to be inconvenienced, request the warehouse-man to make delivery of goods covered by a negotiable receipt with the promise to present the receipt for surrender or endorsement of partial delivery at some more convenient time. Refusal of the warehouseman to violate the law by comline with such requests occasionally develops friction which is entirely obviated in the use of non-negotiable receipts."

Mr. Paton's Indorsement

THE Halm document next sets forth the text of the uniform warehouse receipts act as enacted in the State of New York. With the exception of a few minor changes in some of the States, this act is in effect in all States except Arizona, Georgia, Indiana, Kentucky, New Hampshire and South Carolina.

The document concludes with a list of the membership of the A. W. A. as

of date of November, 1920.

Reprinted in the pamphlet is a letter from Thomas B. Paton, general counsel for the American Bankers' Association, expressing appreciation of "this practical and concise treatise" and expressing opinion it would prove of value to all bankers interested in warehouse securities.

NEW YORK, Dec. 31-Distribution has been begun of the pamphlet "Warehouse Receipts for Collateral" in its revised form as decided upon in conference at the White Sulphur Springs convention. The changes were made here under the supervision of William E. Halm, chairman of the A. W. A. committee on banks and warehouses, and the document in its final form presents even a finer physical appearance than the original.

HELP JONES!

HELP JONES!

Government Methods a Threat to the Warehouse Industry

Federal Action in Allowing Army Storage Plants to Be Operated Unfairly in Competition Is to Be Fought by A. W. A. Committee. Railroads' Absorption Practice Discriminates Against Public Merchandise Warehousemen

WHITE SULPHUR SPRINGS, W. VA., Dec. 10.

THE warehouse industry to-day is confronted with a serious situation in relation to commercial utilization of storage plants and piers which the Government owned and operated during the World War. The industry is threatened with widespread competition by municipalities which, accorded privilege by the War Department to operate the Federal plants, may file tariffs which the industry would consider unfair and confiscatory. The industry is threatened with loss of business also from another source—rebates by railroads to railroadowned warehouses in the matter of absorbing various charges.

Each menace was discussed at the convention of the American Warehousemen's Association here, and it was decided to go to the Interstate Commerce Commission. A special committee of Southern members of the A. W. A. will handle the case of the railroad absorption charges, and either the executive committee or a committee appointed by Willard W. Morse, president, will investigate the port warehouse situation in an effort to defeat encroachments by municipalities or by "political and fly-bynight" warehousemen on the domain of public warehousing.

Although the port situation is understood to be acute at this time only at Norfolk, Va., the condition generally was held to be national in character, in as much as inequitably low tariffs by port municipalities would, it was declared, tend to attract business to those ports, and public warehousemen inland accordingly would suffer.

W HAT warehousing has to contend with is tersely set forth in the report of the committee on railroads and steamships, F. L. Bateman of Chicago, chairman, as follows:

"A notable instance in destructive competition is covered by tariff filed under the auspices of Arthur G. King, Port Director of the City of Norfolk, with the Interstate Commerce Commission. This situation promptly engaged the attention of our Norfolk members and a protest was filed with the Commission by Messrs. Jones & Co. and the Seaboard Wharf & Warehouse Corp.

"The complaint points out for instances as typical the storage rate on fertilizer for a year at 40 cents

COMMITTEE APPOINTED

BOSTON, Dec. 29—The port warehouse situation is to be handled on behalf of the American Warehousemen's Association by the organization's 1921 Committee on Railroads and Steamships. President W. W. Morse has appointed as chairman of this committee George S. Lovejoy, manager, general storage department, Quincy Market Cold Storage & Warehouse Co., of Boston.

Mr. Morse has been in Boston conferring personally with Mr. Lovejoy on the situation, and it was decided to make inquiry, according to Mr. Lovejoy, "to see that the Army warehouses are properly placed and do not get into the hands of unscrupulous people or people not acquainted with the business."

Meanwhile there is agitation in the Massachusetts State Legislation for an investigation in Boston. Thomas A. Niland, Representative of East Boston, charged at the recent special session of the Legislature that valuable space was being rented to the Atlantic Warehouse Co., a private corporation, "at a scandalously low term." Mr. Niland declared that the State Department of Public Works was renting storage space to the Atlantic company for five cents a square foot, whereas public warehouse companies generally are obliged, in order to make profits on their investments, to charge so far in excess of that rate that it would be difficult for them to compete with the tariffs of the Atlantic company.

The House rejected Mr. Niland's request for an inquiry at this time and the matter goes over until the next regular session of the Legislature.

per ton as against Jones & Co. rate of 50 cents per ton per month, or \$6 a year for the same material and the same time. Cement, in barrels and bags, under the Port Commission's tariff covers a wharfage and handling charge of 1½ cents per 100 pounds, together with storage rate for each thirty days or fractional part thereof of ½ cent per 100 pounds.

"These confiscatory rates are brought about by means of the City of Norfolk utilizing piers and warehouses turned over to them by the War Department. While the ambition of any port or municipality to attract export freight and distribution is commendable, such processes should not be engaged in when it leads to the destruction of a legitimate industry unless compensatory measures were granted.

"Members at other ports have experienced the same difficulty and our Norfolk members, therefore, have requested that the pending action before the Interstate Commerce Commission he handled in the name of the American Warehousemen's Association with the entire backing of this industry. The suggestion was approved by members of the Committee on Railroads and Steamships.

"Arguments advanced by other cities in which municipal warehouses have been operated, such, for instances, as Seattle, Los Angeles, etc., were based on the theory that business in these municipalities should not be held back in the interest of the comparatively small investment represented in private warehouse enterprises.

Urges Vigorous Action

"The public generally lend a very sympathetic ear to this argument, and if the American Warehousemen's Association, therefore, is to exert an influence in behalf of the warehouse business as a private enterprise it must attack vigorously every instance of this kind that comes to its attention. The attack should be based on the theory that such low rates are confiscatory and that when warehouses are operated by municipalities, port commissions' or carriers' rates should be based on reasonable cost of production, incliding a reasonable profit on the investment. Ruthless warehouse competition between municipalities can only result in temporary advantage at best."

THE situation was brought to the convention's attention by Arthur P. Jones, president of Jones & Co., Norfolk. Alluding first to the railroad warehouses, he said that goods have been

stored there by the carriers on unremunerative bases and that recently, owing to increased costs, the railroads have been endeavoring to raise these rates.

The Southern Rate Classification Committee on Sept. 8 filed with the Interstate Commerce Commission, Mr. Jones explained, a schedule affecting wharfage storing and handling tariffs at Virginia, South Atlantic and Gulf ports, basing this schedule on labor and other costs—on actual expenses of handling, plus overhead, plus a fair profit.

IS IT FAIR?

CERTAIN railroads which operate warehouses are absorbing the unloading charges at those storage plants. Those railroads refuse to absorb the same charges when goods are unloaded at a public warehouse. Is it fair?

Army warehouses have been turned over to the Port Commission of Norfolk, Va. The Port Commission is operating the warehouses on a profit-sharing basis, the Government receiving 50 per cent of the gross revenue. But the rates charged by the municipality are so low as to kill competition by the public warehouseman. Is it fair?

The American Warehousemen's Association believes these practices are NOT fair.

Read this story of what the association purposes to do about it. Briefly, the steps are:

1. A group of southern members will appear before the Interstate Commerce Commission to support the railroads in the request by the carriers for right to increase storage rates at railroad warehouses.

2. A committee representing the American Warehousemen's Association will investigate the port warehouse situation with a view to preventing "political and fly-bvnight" warehousemen from gaining control of Army warehouses and competing, on unprofitable basis, with public warehousemen.

There are efforts by shippers to combat these new rates, which are tariffs with which public warehouses could compete, Mr. Jones said. He asked that the American Warehousemen's Association be represented before the Interstate Commerce Commission in support of the schedule filed by the carriers. He added that on Nov. 3 the Seaboard Air Line filed a tariff of increases and said that if opposition developed the A. W. A. should be at the hearing to aid.

Mr. Jones brought up a condition existing at Norfolk—that railroads undertake to unload for railroad warehouses free of charge, but do not adopt that practice when unloading to public ware-

houses. The speaker believed it to be the duty of the A. W. A. to follow up this situation and compel railroads either to refrain from absorbing these charges or to absorb the charges of public warehousemen as well.

The municipal situation at Norfolk was then described by Mr. Jones. When the World War began, warehouse facilities were less in proportion than any other facilities required for War Department purposes. There were no great terminals to be diverted to Government uses. The Government had to build, and it built at Norfolk, where it took over municipal dock property and spent \$30,000,000 on warehouse and pier development.

To-day the city is undertaking to operate this property on a profit-sharing basis, the Government getting 50 per cent of the gross revenue. The city's plan is to operate for the benefit of the port; that is, without any warehousing profit for itself; and thus attract commerce to the port. Under this policy no consideration had been given to the existing business of public warehousing, Mr. Jones said.

Unpatriotic(?)

The city arranged with the Interstate Commerce Commission that railroads entering Norfolk should absorb all labor charges. But the railroads are not at the same time absorbing these charges for the public warehouses, Mr. Jones said, and the warehousemen of Norfolk objected. They filed a protest with the Interstate Commerce Commission, requesting that the tariff filed not be allowed. The I. C. C. suspended the tariff and fixed a hearing for Nov. 19.

When the Port Commission of Norfolk learned of this it requested Norfolk public warehousemen to attend a meeting. They did—and were told they were "unpatriotic" to the port's interests. The warehousemen were asked to withdraw their objection. To this plea the warehousemen responded by sending a telegram to the Interstate Commerce Commission to the effect that "at the request of the Port Commission" their objection be considered withdrawn.

But the I. C. C. replied that the case must proceed and a hearing be held notwithstanding.

The hearing was held as scheduled, on Nov. 19. The Norfolk warehousement were represented and declared the Port Commission's practices were wrong. The outcome was that the Port Commission's tariff was suspended until March 1, 1921.

The I. C. C. had not yet announced a decision, Mr. Jones said, adding that its attitude in effect toward the Norfolk Commission was: "Do you wish to establish before this Commission [the I. C. C.] that you are a public carrier?" Whereas, in the opinion of Norfolk's warehousemen, the Port Commission is nothing more or less than a storage warehouse.

"Shall we attempt to eliminate these absorption charges or shall we let the railroads establish a standard which we'll have to meet?" Mr. Jones asked,

and alluded to the probability that the Government would lease army warehouses and terminals at Boston, New York, Philadelphia, Charleston and other ports, resulting in competition with public warehousemen.

William E. Halm, New York Dock Co., said the A. W. A. should support Mr. Jones' request for action. Mr. Halm thought there should be an inquiry into practices at ports and into railroad rebating in favor of railroad-owned warehouses.

It was brought out that some warehousemen felt that railroads might revive the former practice of storing goods free for thirty or sixty or ninety days, thereby taking business away from public warehousemen.

Would Need Solid Facts

George S. Lovejoy, Quincy Market Cold Storage & Warehouse Co., Boston, said that any inquiry undertaken would entail considerable expense, requiring services probably of an examiner and an attorney, and that such inquiry would have to be thorough to get results, as the A. W. A. would have to go before the Interstate Commerce Commission with "solid facts." The I. C. C. would welcome anything which would justify granting higher rates to the railroads, Mr. Love-joy believed, and the A. W. A. going before the commission should have effect. He warned against allowing "political and fly-by-night" warehousemen getting a foothold at ports where army warehouses are located.

The question was brought up as to what extent cities other than Norfolk were affected. H. C. Avery, Union Terminal Warehouse Co., Jacksonville, de-clared the A. W. A. should support the

"HELP JONES!"

IT was Arthur P. Jones, president of Jones & Co. of Norfolk, who brought the port warehouse situation to the attention of the warehouse industry, and-

"Help Jones!" became a battle-cry at the A. W. A. convention at White Sulphur Springs.

"If we are going to back Jones at Norfolk we must go into this whole situation," said George S. Lovejoy, Quincy Market Cold Storage & Warehouse Co., Boston.

"Jones has a concrete case," said Samuel G. Spear, Terminal Wharf & Railroad Warehouse Co., Boston. "It is a national matter-not local. It will help all. Help Jones!"

Jones is going to help himself. He will head the A. W. A. committee which will go before the Interstate Commerce Commission on January 10 to support the railroads' plea for privilege to charge higher storage rates, which "a powerful group of shippers" is expected to oppose.

carriers' request for increased rates. Louis B. Magid, Appalachian Corp., New Orleans, said the same railroad conditions existed at that port. It was brought out that "a powerful group of shippers" would oppose the railroads' petition to charge higher storage rates. W. I. Ford, Inter-State Forwarding Co., Dallas, declared railroad competition at the ports would attract business from inland warehouses which could not complete with confiscatory tariffs at seaboard; the carriers should not be permitted to store at rates found by public warehousemen not to be remunerative, Mr. Ford urged, and any action undertaken by the A. W. A. should have "teeth in it." Mr. Jones asserted that hundreds of warehousemen throughout the country were affected by the absorption charge situation.

Discussion of railroad warehouses developed a consensus of opinion that there was no objection by public storage executives to railroad warehouses as such, if they adopted the same tariffs as the public companies, but that the latter did object if carriers' houses operated at a loss, giving free service, etc.

Mr. Lovejoy estimated it would cost \$8,000 or \$10,000 to carry on the general inquiry proposed, but declared that if the association once went into the situation it should do so thoroughly.

Two Committees

It was voted that a special committee of Southern A. W. A. members should go before the Interstate Commerce Commission on Jan. 10 to support the railroads' plea for the right to charge higher storage rates. It was left to Mr. Jones to appoint this committee.

Talking to the motion that an A. W. A. committee investigate the general port warehouse situation, Mr. Magid said that unless a remedy was found there would be losses suffered by public warehousemen who have invested millions in their business and had records of years of experience. "The time for warehousemen to act is now, not later," he declared.

The motion was adopted, with an amendment by D. L. Tilly, New York Dock Co., that cold storage warehousing interests participate.

N. Y. ASS'N'S ANNUAL **MEETING ON JANUARY 17**

NEW YORK, Dec. 29-The twentyfourth annual meeting and dinner of the New York Furniture Warehousemen's Association will be held here on January 17, it is announced by Charles S. Morris, secretary. The business meeting will begin at 3 p. m. and the banquet at 7 p. m.

With the close of this fiscal year all members outside of New York State will be dropped at this meeting and the organization will become a State body only, in keeping with the plan announced when the National Furniture Warehousemen's Association was formed. Many warehousemen now associate members are expected to attend the meeting.

Officers will be elected for the ensuing

Incorporation

SYRACUSE, N. Y., Dec. 20-The Producers' Warehouse & Elevator Co. has been organized here, with active capital of \$450,000, to operate warehouses in Syracuse and Buffalo. Incorporators are W. L. Bean, S. J. Lowell and R. C. Hitchins

Literature

"THE FURNITURE WAREHOUSE-MAN"

THE first number of the official publication of the National Furniture Warehousemen's Association made its appearance in November, issued from the office of the secretary, Ralph J. Wood, 4259 Drexel Boulevard, Chicago. This 44-page magazine, with covers, contains a list of officers, directors and commit-tees; an account of the semi-annual meeting at Mackinac Island, Mich., last July; membership notes; an account of the New York strike by drivers, helpers, warehousemen's packers, etc., and the speech by Charles S. Morris, president of the Van Owners' Association of Greater New York to striking employes; legal matters; accounts of local Association meetings; "Household Goods Base Rate Table," by John Bekins, Omaha; list of the National's meeting, and six pages of

The Furniture Warehouseman has made an excellent start.

NEW BEDFORD CO. BIDS \$75,000 FOR PIER LEASE

NEW BEDFORD, MASS., Dec. 23— The New Bedford Storage Warehouse Co. has put in a bid for lease of the State pier here at rental of \$12,000 the first year, \$13,500 the second, \$15,000 the third, \$16,500 the fourth and \$18,000 the fifth year.

In the proposal submitted to the State Department of Public Works, Clarence R. OBrion, general manager of the company, says further:

The Agreement

"It is further agreed that the New Bedford Storage Warehouse Company will agree to exercise all reasonable efforts supplementing work that has al-ready been done in advertising and personal solicitation to encourage the loading and unloading of vessels at the wharf, and will in every possible respect co-operate with the authorities of the commonwealth in improving and developing the harbor of New Bedford and the transportation and terminal facilities of the city of New Bedford, and otherwise advancing the shipping and commercial interests of the city of New Bedford."

Saving \$9,000 a Year Through

COST ACCOUNTING

How a Kansas City Warehouse Company Is Doing It

By B. S. Brown

THROUGH application of cost accounting the Southwest Warehouse Corp. of Kansas City, Mo., has already rescued about \$750 a month, and other warehousemen in the same city are throwing out this life line to similar losses.

An outstanding feature is that the larger part of the saving is actually saving. It does not represent appreciable increases in charges to customers. In-

deed, there are many patrons who have had no additional charges at all against their accounts.

The initial steps in this program of readjustment on the basis of accurate cost finding having been taken by the Southwest company, the data is being analyzed by a committee of the Kansas City Warehousemen's Association and applied to the city's storage business in general.

D. SMITH, vice president and general manager of the Southwest, has been an ardent advocate of careful cost accounting and co-operative study of problems not only in the local association but in the Central Warehousemen's Club and the American Warehousemen's Association. In R. R. Carroll, assistant manager, Mr. Smith found the man to execute these ideas.

A preliminary survey of the books convinced Mr. Carroll that losses probably would appear in two phases of service—transfer and labor. He concentrated on these first.

Before describing the process of rescuing losses, it would be well to mention one of Mr. Carroll's conclusions from his inquiries: that conditions in warehouse operation vary so widely that only by study of his own operations can a warehouseman safely apply the lessons that another warehouseman has learned. This statement applies particularly to the outcome of the study of transfer costs.

The Southwest company had three methods in use in its transfer department. It owned one truck, hired two trucks regularly and employed other trucks by the hour when additional equipment was needed. Its stated charge for transfer was ten cents per hundredweight. Tickets were printed, on which transfer items were recorded. Tickets showing transactions with the company's own truck showed weight of shipment, time consumed by truck and cost to the company of the delivery. Practically the same data was shown, on cards, of transactions with the other trucks.

Two months' keeping of such rec-

ords gave ample basis for conclusions. The company was losing money on nearly all of its transfer work! The problem then was faced as to which alternative to adopt: either the organization of a department to handle the transfer work, or the letting of a contract under which all the work would be done by an outside company.

The latter plan was decided upon. The company made a contract with a fleet owner for hauling at seven cents

THE profitable fever of cost finding has seized the warehousemen of Kansas City. Storage executives in all cities may with benefit borrow upon a well-known flour manufacturer's advertisement and ask themselves: "Eventually—why not now?"

This article by Mr. Brown tells something about how the Southwest Warehouse Corp. of Kansas City has blocked losses amounting to \$750 a month—through cost accounting. This runs into \$9,000 a

"Know your business!" It pays!

per hundredweight. The work is so adjusted that this contractor has a large volume continuously, and can easily care for the over-demand that occasionally occurs.

The Labor Cost Adjusted. Two months of checking of labor time was amply sufficient to show up several avenues through which money was trickling.

Four classes of work seemed to re-

quire immediate action, in slightly increased charges. More than a month's notice of such intended increase was sent to all customers; and when November 1, the date for the increase to begin, arrived, not a single objection had been received from a customer. It was obvious, therefore, that the patrons of the house appreciated the justice of the charge—which in fact was in most cases merely nominal.

It was stated in the foregoing that not all customers met any additional charge through the readjustment. There is in Kansas City already a charge of one cent per package, minimum charge of ten cents per shipment for marking goods for shipment and for furnishing bills of lading. This charge had been imposed only in special circumstances, when obvious additional labor was needed for the service. The investigation disclosed that the service required more time than had been realized, so that this rule is now made to apply in each case.

Another rule that had applied only to a few cases was that making a charge of one cent per package, minimum 15 cents, for taking and reporting marked weights and numbers, for purposes other than warehouse identification. The investigation disclosed that this service, also, was a source of actual loss; and that mere justice to all customers required that it be observed in all cases.

The third labor cost item considered revealed an even more serious factor of loss—in assorting. The new rates in effect November 1 provide the quoted rate for two assortments to a car, in bulk handling. A 25 per cent.

(Concluded on page 60)

KIPLING WAS WRONG!

West Meets East at White Sulphur Springs and—

A. W. A. Elections Give West Strong Influence

WHITE SULPHUR SPRINGS, W. Va., Dec. 10.

A BROADER national aspect was given the personnel of the controlling officials of the American Warehousemen's Association at the concluding session to-day of the organization's thirtieth annual convention. The presidency, vice-presidency and four of the directorships went to the Central West. The treasurer's office and five of the directorships went to the East.

This wider geographical distribution of important offices apparently was welcomed by the members at large. While nothing was said on the subject on the floor of the convention, it had been generally known that the Central West believed it should have stronger representation in the councils of the association.

Hitherto control was largely in the hands of Eastern warehousemen, and certain of the Western members had let it become known that it was their attitude that the rapid growth of the industry to the west of the Alleghanies, as exemplified in part by the strength of the Central Warehousemen's Club, entitled the West to more influence in the activities of the American.

This feeling by the Westerners met with little if any opposition on the part of the warehousemen in the East. The latter conceded in advance of the appointment of the nominating committee that the claims of the Western men were justified and that the influence of the American as a national body should be stronger with all sections represented among the officers.

Willard W. Morse, president of the Security Warehouse Co., Minneapolis, last year a director, was chosen as president. Mr. Morse has been strongly identified with the affairs of the Central Warehousemen's Club, is president of the Minnesota Warehousemen's Association, and is fully conversant with cost accounting and other problems with which the storage industry is confronted to-day.

R. H. Switzler, secretary and manager of the St. Louis Refrigerating and Cold Storage Co., St. Louis, was elected vice-president. Mr. Switzler is one of the country's leading cold storage warehousemen and has been associated with the American's plans for developing a standardization of basis for rates through the instrumentality of the association's Central Bureau.

C. A. Aspinwall, president of the Security Storage Co., Washington, D. C., and president also of the Security Storage & Safe Deposit Co., Inc., of Norfolk, Va., was chosen treasurer. Mr. Aspinwall holds high rank among household goods warehousemen and is one of the representatives of that branch of the industry in the activities of the Central Bureau. He is a member of the executive committee of

the furniture sub-division of the American.

Charles L. Criss, Pittsburgh, continues as general secretary of the American, a position he has held for

The merchandise sub-division se-

1921 OFFICERS OF THE A. W. A.

President, Willard W. Morse, Minneapolis.

Vice-President, R. H. Switzler, St. Louis.

Treasurer, C. A. Aspinwali, Washington, D. C.

Secretary, Charles L. Criss, Pittsburgh.

lected the following executive committee: Three years each, George S. Lovejoy (retiring vice-president of the A. W. A.) of Boston, and T. E. Witters of Baltimore; two years each, George Hamley of Minneapolis, and L. T. Crutcher of Kansas City; one year each, William E. Halm of New York City, and Roy C. Griswold of Chicago.

The cold storage sub-division se-

lected the following executive comittee: Three years each, W. B. Mason of Providence, and Homer McDaniel of Cleveland; two years each, Gardner Poole of Boston, and G. H. Sapper of Galveston; one year each, T. A. Adams of Brooklyn, and A. V. Mason of Pittsburgh.

The household goods sub-division elected the following for one year each to fill vacancies: W. Lee Cotter of Mansfield, Ohio, C. A. Aspinwall of Washington, D. C.; James F. Keenan (retiring president of the A. W. A.) of Pittsburgh, Walter C. Reid (retiring treasurer of the A. W. A.) of New York City, J. W. Glenn of Buffalo, and S. C. Blackburn of Kansas City. The first four were re-elected, and Mr. Glenn and Mr. Blackburn succeed T. Y. Leonard of Detroit, and F. L. Bateman of Chicago.

Of the members of the three foregoing executive committees, the following were chosen as members of the new board of directors of the A. W.

Merchandise sub-division: L. T. Crutcher, Kansas City; Roy C. Griswold, Chicago; T. E. Witters, Baltimore.

Cold storage sub-division: W. B. Mason, Pittsburgh; Homer McDaniel,

Cleveland; Gardner Poole, Boston. Household goods sub-division: W. Lee Cotter, Mansfield, Ohio; J. W. Glenn, Buffalo; Walter C. Reid, New York.

On the floor of the convention there was a stir when the names of George S. Lovejoy, William E. Halm and Roy C. Griswold were read, on behalf of the nominating committee, as being that committee's selections to represent the merchandise sub-division on the board of directors. It transpired

that on the actual slate of the committee were Mr. Griswold, Mr. Crutcher and Mr. Hamley. Through an error the names of Mr. Lovejoy and Mr. Halm were substituted for those of Mr. Hamley and Mr. Crutcher when the committee's report was read to the convention. A hurried conference was held which disclosed the mistake, and Mr. Halm and Mr. Lovejoy withdrew from the committee's list in favor of two Central Western men originally selected.

The election of executive committee members for one, two and three years respectively is a new procedure. Under by-laws now amended, hereafter the nominating committee will select six names each year; two will be elected to succeed retiring committeemen.

The nominating committee comprised Samuel M. Woodson, Kansas City; E. H. Bacon, Louisville; Heber Page, Dallas; Clarence R. OBrion, New Bedford, Mass., and E. H. Maxwell, New York City.

THE MOTO-LIFT

A New Labor Saving Machine for Warehouses

A MACHINE which attracted much attention at the marine exhibit held recently at Chicago was the moto-lift, the latest labor-saving commodity-handling appliance produced by the Brown Portable Conveying Machinery Co. of that city.

The moto-lift is intended for use in terminals and ware-houses and places where it is necessary to pile package freight of considerable weight to heights above the convenient reach of men standing at floor level, and where space is too valuable to permit wide aisles and large open spaces. It is an intermittent-operating machine.

So constructed that it may be moved about by its own power by engine or motor, the new machine is of the vertical-lift, cantilever platform type. Its upright channels, which serve as platform guides, are hinged and may be collapsed in order to pass under low obstructions. There is no obstruction in front of these guide channels. This permits the machine to be driven up to and against a pile, so that the platform extends over the top of the pile and makes it easier to transfer the goods. The platform may be lowered to the floor to pick up any regular lift truck platform or to permit a hand truck to be run onto the platform. The standard machine will handle one thousand pounds at a time.

The speed of the platform lift is 35 feet per minute.

The load may be lowered either at the same rate under power or may be lowered by gravity at approximately four times that rate.

The machine travels over the floor at the rate of about 100 feet per minute and is capable of moving at nearly the same rate with its full load in either the high or low position of platform.

The platform arms are hinged and may be folded back to reduce space necessary for storage when not in use; or platform may be entirely removed, leaving the steel platform arms to be used in handling lift truck types of platforms. One important advantage of this hinge is to permit turning machine in narrow space.

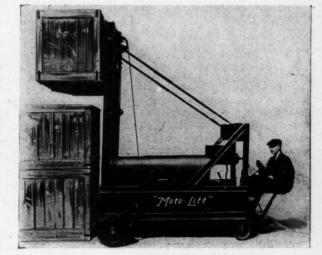
Power may be either engine or electric motor. The engine used can be run on gasoline, kerosene, petrol, naptha, alcohol and engine distillates; but as it must be started on gasoline, a two-compartment tank is provided for this purpose. Friction clutch is provided on crankshaft so that engine can be started free.

The entire frame is made of structural steel shapes, principally channels. All connections are well made, properly riveted or bolted, and the upright guide channels are braced by pipe braces provided with turnbuckles. These pipes are used in raising and lowering the channels, being properly jointed for this purpose.

Friction clutches of the disc type are used throughout for engaging the driving sprockets and gears.

The forward and reverse for the traction and the up-anddown movement for the platform are controlled through a box miter gear with duplex friction clutch.

The entire control of the machine is located at the rear end of the machine within easy reach of the operator, who is



provided with the agricultural type of seat at this point. The machine has three hand control levers, one steering wheel and one foot pedal. The wheel is used for steering the machine by means of worm gearing.

The first lever to the right (as shown in the photograph) controls the duplex clutch on the box miter gear.

The next throws in the clutch which drives the traction. The lever to the extreme right operates the hoist clutch.

This lifting part of the machine possesses automatic features. The platform is maintained at any level by means of a differential brake-band, the brake wheel itself being part of the clutch which drives the hoist. Through a simple system of levers, cams and rocker arms, this brake band is released when the clutch is thrown in to drive the hoist and automatically sets when the clutch is thrown out, accomplishing with one lever what is usually performed by two levers. When desirable to lower load by gravity, the foot pedal is used, this also releasing the brake-band.

All bearings are babbitted or brass-bushed, and are liberal in design. Lubrication is secured either by spring compression grease cups or oil reservoirs.

The platform itself is provided with a very powerful link motion, actuated by a helical spring, which prevents the platform from dropping if the cable should break. There is also provided an automatic overhaul feature, which prevents the platform from overrunning. The entire mechanism is housed over by a sheet metal hinged hood, so as to keep out all possible dirt, and the traction drives are provided with full sheet metal guards.

With the machine an operator can pick up from the floor a loaded lift truck platform, or a loaded truck, carry it down a warehouse aisle, elevate it and deliver it on top of the pile—while this is being unloaded by the men on the pile, the operator can pick up an "empty," turn in a small radius or back up, leave the empty, pick up and deliver a new load, thus keeping in constant operation.

Indorsement of

THE OPEN SHOP

Is Voted by American and National Associations at White Sulphur Springs Conventions

HE open shop has been indorsed by the American Warehousemen's Association and by the National Furniture Warehousemen's Association. Each organization at its December convention at White Sulphur Springs, West Va., adopted a resolution to that effect. The text is printed on page 23.

It is significant that the action taken follows the open shop triumph won by the Van Owners' Association of Greater New York in its controversy with employees. This labor dispute had been watched closely by men in the warehouse industry throughout the country.

It was not without some opposition that the memorial was put through at the American Warehousemen's Association convention. It was introduced by William E. Halm, president of the New York Dock Co. Some of the warehousemen, while personally not objecting to the principle of the open shop, were not in favor of adoption of the resolution by the association as a whole. There were a number of negative ballots.

In the National assembly the endorsement was suggested by P. J. Mills, White Line Transfer & Storage Co., Des Moines. Mr. Mills presented a report as chairman of the labor committee and the vote in favor the open shop resolution was unanimous.

Mr. Mills' report was written around answers to a questionnaire which he sent out in November; 350 of these being mailed to members and 250 replies being received. From the answers a tabulation was made of wages paid to chauffeurs, drivers and helpers, and this showed wide variations, with highest wages in centers which have been unionized over a long period. The replies showed also an excess of labor in thirty-five cities and a shortage in ten cities, at about mid-November. Seventy-eight per cent of the warehouses affected, the report indicated, were working under the open shop principle.

The New York dispute was explained at the National's convention by W. C. Gilbert and Charles S. Morris. The following is a chronological story of this controversy:

1914

Van Owners' Association signed a fiveyears' agreement with Local 273 of the Brotherhood of Teamsters. This agreement called for closed shop and for wage increases.

1914-1919

Extra increases were allowed, exceeding those agreed upon, to enable the men to meet the advancing cost of living.

1919

August—Van Owners' and Union committees adopted wage agreement covering one year.

1920

April—Union notified Van Owners that unless a \$5 advance was granted the employees of certain warehouses would take "vacations." Although this was in violation of the 1919 agreement, which still had three months to run, the Van Owners granted the \$5 increase, but with the understanding that this advance should be taken into consideration when the time came, in August, 1920, to discuss a new agreement.

New Agreement

August 13—Van Owners' and Union committees met to discuss new agreement. Union demanded increase of \$8 per man per week, with working day reduced from nine to eight hours. Union committee did not take into account the

\$5 advance already allowed in April. Van Owners' offered \$3 increase (or \$8 in all, including the April increase), with no change in length of working day. This offer apparently met approval by Union committee.

August 19—Van Owners' Association ratified the agreement proposed.

August 31—Union voted to strike. According to the Van Owners' Association, the Union took this action without discussing the Van Owners' offer and without notifying the Van Owners'.

The Strike

September 1—Union men went on strike. At this time the Van Owners' Association had about 150 members. Committees were organized to handle publicity, finance, labor, protection, legal and other affairs. The city was divided into zones, with a captain for each zone. Members subscribed more than \$41,000, of which about \$25,000 was spent during the fight which followed. For several weeks the Van Owners' did not undertake to operate vans but carried on propaganda work among employees.

September 20—Van Owners' began recruiting new forces and, with the aid of the police, the operating of vans was resumed. Membership of Van Owners' meanwhile had expanded to more than 260 companies. Two companies, not members of the Association, had capitu-

lated to the Union's demands.

October 11—Employees questioned Charles S. Morris, president of the Van Owners' Association, and learned that the Association had incorporated its offer in a letter to Col. Regan, of the New York State Board of Mediation and Arbitration. These employees declared Col. Regan's letter in full had never been presented to them by Union leaders. The employees asked Mr. Morris to address a meeting of the strikers. Mr. Morris agreed to do so.

October 13—Mr. Morris addressed more than 1,500 striking employees. He told them the Association would take back only those they could use; that it would not re-employ law breakers; that those who returned would have to do so at the \$3 increase proffered on August 13; and that open shop conditions must prevail. He promised them a square deal. Shortly after this meeting the Van Owners' Association obtained an injunction to restrain the strikers from harassing the employers. This action was taken because of disturbances as the outcome of which the Association's legal committee obtained twenty-two convictions.

The Return

October 15—The men voted to return to their jobs.

October 18—The strikers returned. This was forty-eight days after they had walked out. To those taken back no wage increase was granted, nor was the working day shortened.

Mr. Morris' open shop reference in his speech of October 13 reads as fol-

"The base of the situation narrows right down, as I see it, that you may just as well know that for six years a relation existed that never should have been broken; a relation existed that was possibly unparalleled between the employers and employes. With one fell swoop, a friend of six years beats you down with a strike. It seemed to us as much a slap at your own Union representatives as it was at us.

"Under such conditions, is it to be anticipated that we can again enter into a contract with the Union? If so, then all that I have said might just as well have been unsaid.

No Fight Against Labor

"I want to state, gentlemen, that the Van Owners' Association has declared unequivocally for the American plan of employment, commonly known as the open shop. Any of you men that wish to may come back to work, if we can use you. We have no fight with organized labor. Please bear that in mind. We don't say you can't come back, nor are we going to take advantage of the situation when you do come back. It will not be possible for all of you to come back for, I ask you, men, how would it be possible for us to take all of you when the profits of this year have been wiped away, profits that can't come back, profits never to be retrieved?"

"labor disturbance" of a different A type came directly to the attention of warehousemen at White Sulphur Springs on Dec. 9. The American Warehousemen's Association held

AMERICAN PRINCIPLE

Following is text of open shop resolution adopted at White Sulphur Springs:

WHEREAS-Fair dealing is the fundamental and basic principle on which relations between employes

and employers should rest.

WHEREAS—Every person possesses the right to engage in any lawful business or occupation, and to enter individually or collectively into any lawful contract of employment, either as an employer or an

ment, either as an employer or an employe. These are rights subject to limitation only through a valid exercise of public authority.

WHEREAS—The purpose of the "Open Shop" is to establish equitable conditions for employers and employes with justice to all concerned by securing to every individual the right to work in any place where there is need for his industry at any time and at any wage which is satisfactory to him, or to quit his employment whenever and for whatever reason may be to him controlling, subject only to such contract relations he may willingly enter into or are imposed willingly enter into or are imposed

by an American Court of Justice or by duly enacted law. NOW, THEREFORE—BE IT RESOLVED that the American Warehousemen's Association in annual convention meeting at White Sulphur Springs, West Virginia, endorse without reservation the American principle of the "Oper Shop" as above set forth, and

FURTHER BE IT RESOLVED. that every member thereof will endeavor to see that the above principles are maintained, that law and order may be preserved in this Republic.

its annual convention banquet that night, at the Greenbrier Hotel. The headwaiter became officious and obnoxious, ordering delegates who left

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their seats, to return to their chairs when they arose to chat with friends.

The atmosphere surrounding this individual became quickly hostile and he was threatened with being banished forcibly. This did not quiet him and the climax came when he roughly grasped a venerable warhorse of the warehouse industry and pushed him into a seat.

In the audience were several fiery Virginians. These seized upon the headwaiter at several north and south points of his raiment and catapulted him from the room into the lobby, where one of the southerners propelled a clenched fist to a spot in the vicinity of the chin.

J. F. K.'s Surprise

The objectionable individual had not been compelled to depart, however, before shouting that if he lost his job he would bring the banquet to an abrupt close because all the waiters were union men and he would call them off the floor. To which threat there were shouts of "We've settled that question!"-alluding to the open shop resolution adopted in convention.

After the ejection the banquet went on. James F. Keenan, of Pittsburgh, retiring president, always in his element as toastmaster, sprang a surprise during his after-dinner storytelling. The headwaiter returned and was introduced by Mr. Keenan. The "headwaiter" announced he was one of Mr. Keenan's van drivers, and told a few yarns on his own account.

It transpired, however, that the "headwaiter" was a professional "entertainer" who earns revenue by putting on the labor "stunt" which he so successfully had carried through. The wallop to his chin did not damage him and he was under contract not to retaliate if handled roughly.

A. W. A. CONVENTION ODDS AND ENDS

WHITE SULPHUR SPRINGS, W. VA., Dec. 10.

CUMMARIES of some of the reports and speeches made at the thirtieth annual convention of the American Warehousemen's Association are presented herewith. These touch on such a wide variety of subjects as membership, cost accounting, uniformity,

labor saving, warehouse construction, transportation and legislation. Bids for the 1921 convention were received from Springfield, Mass.; Chicago, Minneapolis-St. Paul and New Orleans.

The summaries follow:

President's Report

JAMES F. KEENAN, in his report as retiring president of the American Warehousemen's Association, said the past year had been a busy one for the industry, with reports showing "that the volume of business offered has averaged above the normal" practically throughout the period. Alluding to labor trou-bles, he remarked that "it is incumbent

upon us to take the good with the bad and, so far as consistent, to do our part whether collectively or individually as citizens in maintaining the orderly movement and operation of the commercial and industrial life of the country."

The growth in membership, a net gain of about one-fifth, had been most gratifying, Mr. Keenan said, and "an unusual amount of constructive work" had been

carried on by the various committees. The A. W. A. and its members and the industry generally were indebted "more than they may now realize" to the work of these committees, he said.

Mr. Keenan referred to the organizing of the National Furniture Warehousemen's Association, declared that "its successful future is assured," and wished the new body good will.

NEWLY-ELECTED OFFICERS OF AMERICAN WAREHOUSEMEN'S ASSOCIATION

(See Page 20 for Story of A. W. A. Elections)

Vice-President



R. H. SWITZLER,

Secretary and Manager, St. Louis
Refrigerating & Cold Storage Co.,
St. Louis

President



WILLARD W. MORSE,

President, Security Warehouse Co.,

Minneapolis

Treasurer



C. A. ASPINWALL,

President, Security Storage Co.,

Washington, D. C.

Secretary's Report

THE past year has been probably "the most important" in the history of the A. W. A., Charles L. Criss said in his report as general secretary—a year filled with constructive work which "has embraced nearly every phase of the public warehousing industry and lines incidental thereto," placing before warehousemen "the best and most authoritative information on many subjects of vital interest."

Mr. Criss alluded to the cost finding primer lessons issued by the A. W. A. and announced that, with the completion of these and the distribution of cost accounting forms among members, the Central Bureau would be prepared "to take up actual constructive work" in cooperation with groups of warehousemen in various communities. Several members had sent in reports on handling cost work, and as soon as a sufficient number had been received so that dependable averages could be worked out, these would be made public, Mr. Criss said.

"There is a curious feature about this accounting work which has been commented upon by a member," the secretary went on—"that in every case where it has been conducted fairly and systematically any pessimistic attitude toward it has been promptly discarded on account of the interest created by finding out things which the plant manager didn't know or believe about his own

operations. While information on certain operations or matters secured from others is invaluable, the conditions in any individual plant are of the utmost importance, particularly in the matters of efficiency in operation, overhead expense, etc. Accurate knowledge on these things is worth the effort in any plant."

Discussing general business conditions, Mr. Criss said reports indicated heavy volume in all branches of the industry throughout the year, "and in most instances under advanced ratings for labor and services, and in some cases on storage space." He added:

"It is probably safe to say that there are to-day few if any tariff structures making adequate provision for the extraordinary increases in these costs, particularly when considered in connection with present-day space costs whether for new construction or on the basis of replacement values, and it is apparent that such degree of prosperity as they have enjoyed is mainly attributable to either or both of two factors, the operation of facilities secured under a wholly different and lower range of costs, or-andthe fullest utilization of space owing to the 'peak load' condition spread beyond average terms.

"We suggest that this 'peak load' condition which has so largely prevailed, is a factor which may prove very deceptive in several important respects. Warehouse building and extension has lagged under the almost prohibitive scale

of costs; home and other building construction has likewise lagged, resulting in an abnormal demand for space for the storage not only of household goods, but for all kinds of merchandise. In many lines production of goods has caught up with the demand—in some is reported considerably in excess, with consequent accumulation of stocks. It certainly would be contrary to economic principles and practice that such a condition would exist for any considerable time."

Mr. Criss remarked on the increased number of tariffs being published by warehousemen, and urged all members to file theirs with the secretary because they frequently were of use in answering inquiries from shippers and others

inquiries from shippers and others.
"It may be noted, however," he added, "that until a greater degree of uniformity prevails in regard to certain of the basic conditions, these tariffs are in many cases not comparable, and information given without a very careful study of them might be incomplete or even misleading. We refer to such mat-ters as the rules and regulations under which the warehouse may be operating, the quantity breaks, the weights upon which the charge is based, and, in some cases, to the inclusion of fire insurance on the goods. The last year has witnessed a substantial movement toward a greater degree of uniformity in these things; and that this movement is welcomed by the shippers and distributors

who have to deal with many warehouses about the country is fully evidenced in the recent formation of the Shippers Warehousing and Distributing Association, an association of traffic managers, one of the avowed objects of which is to bring about a greater degree of uniformity in warehouse practices and accounting methods."

Labor Saving-Construction

THE report of the committee on warehouse construction and labor saving devices, C. J. Neal, of Cleveland, chairman, emphasized that the high cost of labor has compelled warehousemen "to make a more careful analysis of their business, in so far as labor saving devices are concerned, than ever before" and that more than ever before was material handling machinery being adapted to warehousing.

"Every effort should be made," the report declared, "to use mechanical means wherever possible, to the end that man power may be conserved and economy

effected."

Alluding to warehouse construction, in conjunction with the period of high building costs, the report questioned whether it was "wise and judicious for any warehouseman to have gone forward with much new construction" during the period. The report continued:

"An investigation by the household goods committee revealed that it was impossible for any warehousing concern to build a standard furniture warehouse and be able to sell the space to the public at the cost existing houses were charging. Consequently the warehouse industry had to make one of two choices either go forward with new construction at this greatly increased cost, hoping that the future would be such that the excess cost would be absorbed in some manner, or else follow the line recommended by one of the pioneer warehousemen, and that was to give more careful attention to the way in which our goods were piled and how present space was occupied.

"A number of instances have been noted where a little special investigation on the part of the warehousemen soon showed that their houses had much more capacity than they anticipated and that the increased business was taken care of by a little more good housekeeping on the inside of the plant."

Transportation

PERMANENT good or permanent harm "can be done the warehouse business in vital decisions that are now being made in relation to the country's rail and water transportation system," said the introduction to the report of the committee on railroads and steamships, F. L. Bateman, of Chicago, chairman. The report named five "principal matters which are the concern" of the A. W. A., as follows:

1. Competition of warehouses operated by municipalities, port commissions, common carriers, etc. The committee's reference to this situation will be found in the port warehouse story beginning on page 16.

2. Liability clause in railroad leases

and side-track agreements. In this connection the committee reviewed an agreement reached between the National Industrial Traffic League and the Association of Railway Executives proposing a liability clause to be inserted in all future railroad leases and side-track agreements. This agreement is designed more adequately to protect the interests of shippers when fires occur from sparks from locomotives.

3. Demurrage. Its relation to average agreements, bunch deliveries, rates, charges for spotting cars, etc. The re-port said that, while "there is some question as to whether an increase in demurrage rates would prove to be of benefit to the storage or not," nevertheless it seemed wise that the A. W. A. members should support the carriers' plea for higher demurrage "if it transpires that shippers and receivers are to blame for abuse of equipment." The report mentioned that it has been alleged that cars remain in the hands of shippers 37 per cent of the time, an assertion which is contested by the National Industrial Traffic League on the ground largely that many of the delays laid to shippers are very frequently chargeable to the carriers by reason of bunching delivery of cars.

4. Bills of lading amended form as covered by Supplement No. 9 to Consolidated Classification, October 10, 1920. This situation the committee's report deals with in detail for the information

of the warehouse industry.

5. Loss and damage claims on carload traffic moving under shipper's load and count. The report declares that the present method of dealing with carload traffic "afford an alibi for the carriers in many instances where they are directly responsible for loss or damage en route and place the burden of the proof entirely on the shoulders of the shipper." Various remedies suggested, the report says, have been found to contain faults, and the problem of minimizing pilferage and damage "will never be scientifically correct without some solution of this unknown equation." The committee, the report added, "directs the combined intelligence of this convention to the solution of this question with the hope that someone here may be endowed with super-wisdom enough to prescribe the cure."

The committee's report discussed other subjects, notably the proposal of the American Bankers' Association to finance a foreign trade corporation, which committee approved; the Jones bill on American shipping; and the National Industrial Traffic League, in which, the committee suggested, the A. W. A. should have membership. The report concluded:

We venture the prediction that a year hence American railroad and steamship service will be fully restored and will be looked upon with pride and confidence by all citizens."

Minneapolis Cost Accounting

WILLARD W. MORSE in a talk at the American Warehousemen's Association convention told how Minneapolis, St. Paul and Duluth members of

the Minnesota Warehousemen's Association were co-operating in cost finding. These executives met at round table conferences and submitted reports on operating expenses of receipt and delivery of merchandise, and man-hour time. Already there had been a reduction in operating costs, Mr. Morse said, and the plan had had a marked effect on employes, stimulating better efficiency. One week's costs were compared with those of the previous week, and the reports were being turned over to George A. Rhame, secretary of the Minnesota As-

After the first of the year, Mr. Morse announced, reports would be issued by Mr. Rhame showing comparisons on manhour costs covering October, November

and December.

An important outcome of this recordkeeping, Mr. Morse pointed out, would be tariff revisions which would benefit certain shippers. From viewpoint of both warehouseman and customer, he explained, handling rates would undergo changes to the end that those now too high on some commodities would be reduced.

Laws and Legislation

A LBERT M. READ, Washington, D. C., in his report as chairman of the committee on laws and legislation, reviewed laws and legal decisions affecting the industry during the past year. Alluding to the action of Mississippi in passing the uniform warehouse re-ceipts act, Mr. Read said his committee would continue the fight to have the law enacted in the few remaining States where it has not been passed, and in Porto Rico.

1921 Convention

THE board of directors of the A. W. A. will as usual decide where the next convention is to be held. The Chamber of Commerce of Springfield, Mass., sent an invitation, as did the Chicago Association of Commerce. On behalf of Minneapolis and St. Paul a verbal bid was made by H. L. Halverson, secretary of the Boyd Transfer & Storage Co., Minneapolis, who suggested Minneapolis as the headquarters should the convention go to the Twin Cities. Louis B. Magid, president of the Appalachian Corporation, Inc., New Orleans, invited the A. W. A. to convene at his city providing the date was fixed prior to Thanksgiving Day, inasmuch as New Orleans hotels are crowded during Decem-

As between Springfield and New Orleans, the Massachusetts bid boasted of the dry climate, the Louisiana invitation of a wet one. This very definite line of demarcation may or may not be taken into consideration by the directors.

. Highways Magazine

HIGHWAYS TRANSPORT, printed by the High-Ways Transport Publishing Co., Toledo, O., is the name of a publication being issued by the central division of the National Association of Commercial Haulers.

Rate Increases Granted

By Illinois Public Utilities Commission

To Chicago Merchandise Warehousemen

Read This Story Telling How Higher Handling and Storing Tariffs Were Obtained

ISCUSSIONS among distribution managers as to whether-and how soon-public warehouse rates are going to be decreased are premature at least in so far as they affect the storing and handling of commodities in Chicago. Effective Dec. 1 the Public Utilities Commission of Illinois granted advances. These increases average slightly more than 19 per cent for handling and more than 23 per cent for storing. For storing sugar the advance granted is as high as 50 per cent, and for storing canned goods, as high as 33 per cent; these are among the commodities handled at Chicago in largest volume.

The action by the Public Utilities Commission, coming at a time when some shippers are declaring that

it is logical for warehouse tariffs to be reduced because, so the manufacturers assert, warehouse labor expenses are coming down, is interpreted as recognition that the rates which were in force prior to Dec. 1 were not sufficient to allow for the building of new warehouses so sorely needed in Chicago. The Commission made allowance also for wage increases which Chicago warehousemen were recently compelled to make after the Railroad Labor Board had advanced wages at freight stations, and for the fact that, with changing warehousing conditions in Chicago, it costs more than hitherto to handle commodities because shippers have exhibited a tendency to store in smaller quantities.

THE petition which led to the October 11 by Mr. Smith begins: granting of increased rates was filed on behalf of the Illinois Association of Warehousemen, comprising the following merchandise houses:

Central Storage & Forwarding Co., Chicago Shipping & Storage Co., Chicago Storage & Transfer Co., Currier-Lee Warehouse Co., Continental Warehouse Co., Griswold & Walker, Inc.; F. W. Hagen Co., Harder's Fireproof Storage & Van Co., Midland Ware-house & Transfer Co., Mitchell & Ehninger, Mitchell-Jackson, Inc.; Ontario Warehouse Co., C. H. Ronne Warehouse Co., Railway Terminal & Warehouse Co., Sibley Warehouse & Storage Co., Soo Terminal Warehouse Co., Tooker Storage & Forwarding Co., Waken & McLaughlin, Inc.; West Side Warehouse Co. and Western Warehouse Co. The formal request was made to the Commission on October 11 through Sidney A. Smith, of the Currier-Lee company, and secretary of and counsel for the Illinois Association of Warehousemen. Hearings were held on October 13 and November 17, and the Commission, in its order dated November 18, declares in part

"Considering all the evidence submitted, the commission finds that the proposed rates are relatively just and reasonable."

The Illinois Association of Warehousemen in its petition presented on

"In making this request for an advance in our rates, we fully appreciate that the recent reduction in prices of some commodities has caused a widespread sentiment for the reduction of all prices, but con-

THE INCREASES

VERAGE advances approxi-A mating 19.067 per cent in handling rates and 23.399 per cent in storage tariffs were granted by the Public Utilities Commission of Illinois to Chicago's public merchandise warehousemen, effective December 1.

The higher advances allowed were on goods which make up the large part of storage. On sugar the increase was 50 per cent; on

canned goods, 33 per cent.

No decisions have been announced on the applications for increases filed on behalf of the cold storage and household goods warehousemen.

ditions in our industry are such that if we are to retain our present space and continue to serve the storing public we must have immediate relief.

"As an explanation of the necessity of securing an advance in the handling and storage rates, as provided for in our tariffs just filed,

we wish to present, briefly, a few facts brought out at the hearing here last February, together with statements of handling revenue and costs for the period January 1, 1920, to June 30, 1920."

(The hearing of last February will be referred to further on in this ar-

The petition of October 11 then presents six reasons why increases should be granted; these are given in full on page 27. There follows a more detailed argument in substantiation of each of the six reasons.

Regarding the first-that it was becoming more profitable to lease space outright than to operate warehousing on the rates in force prior to December 1-the petition says:

"The storage rates used in our last tariff were based on a return of 61/4 cents per square foot for the space actually occupied by goods. Experience shows that after deducting for walls, posts, stairways, elevator shafts, aisles, offices, etc., we can only figure this earning on 50 per cent of the gross space; or in other words, our gross space would only earn us three and oneeighth cents per square foot per month, or 371/2 cents per square foot per year.

"Out of this earning must come any loss attributable to handling, and this earning would also be decreased if the space were not occupied at all times.

"An examination of the figures submitted at our last hearing, and which are recapped in the next section, shows that the twelve houses for which figures are shown, representing a total of 2,367,032 square feet, showed a net earning last year of \$553,986.83, or a return of only twenty-three cents per square foot per year.

"It is plainly evident, therefore, that a greater profit can be made by the warehousemen by renting out the space at prices ranging from forty to sixty cents per

square foot.

"At the last hearing, Mr. S. H. Hodge of the firm of Hodge & Chandler testified that the Government paid for the Pennsylvania Terminal, now being operated by the Western Warehousing Co., forty cents per square foot.

Long Term Leases

"Among the leases of warehouse property or buildings of similar character are the following:

"Central Warehouse, to J. L. Kraft & Bros. Co., 100,000 square feet for twenty-five years at approximately 40 cents per square foot; Griswold & Walker, Inc., to Thos. Cusack Co., 100,000 square feet for twenty years at 40 cents per square foot; Currier-Lee Warehouse Co., to Quaker Oats Co., 150,000 square feet for ten years at 40 cents per square foot; Currier-Lee Warehouse Co., to Montgomery Ward & Co., 100,000 square feet for ten years at 40 cents per square foot; Currier-Lee Warehouse Co., to Sprague Warner & Co., 10,000 square feet for two years at 60 cents per square foot; North Pier Terminal Co., space in lots of from 5,000 square feet up, at from 50 to 60 cents per square foot.

Building Restricted

"At the last hearing Mr. Hodge testified to the fact that the increased cost of drayage has had the effect on increasing the demand for buildings served by switch-track and he also testified that the demand for switch-track buildings exceeds the supply by not less than fifty per cent.

"Building operations have decreased very materially and the demand is even more acute at this time than it was

last February."

Alluding to the second reason—that returns were insufficient to allow for building new warehouses—the petition says:

"That the present rates bring an insufficient return to allow for the expansion of the industry is proved by the returns submitted at the hearing last February.

'The figures shown herewith

WHY THE INCREASES WERE GRANTED

HERE are the reasons advanced by Chicago's merchandise warehousemen on October 11, before the Public Utilities Commission of Illinois, in the petition asking permission to charge higher rates:

1. That present rates are insufficient to bring as great a return on the value of the properties used as can be secured through leasing large blocks of space or entire buildings at going rates and that there is a very acute demand for such space on long term leases.

2. That present rates bring an insufficient return to allow for the building of new warehouses, as the net returns from present rates will not make earnings large enough to pay interest alone, to say nothing of depreciation.

3. That there is an actual shortage of warehouse space in the city of Chicago and that this condition cannot be remedied unless some relief is given in the matter of rates, so that new buildings can be acquired.

4. That the handling rates now in effect do not produce enough revenue to cover the cost of the various items which are actually chargeable to handling.

5. That since the period covered by the figures submitted there has been a general advance of approximately 20 per cent in rates of pay to meet the increases granted to railroad freight house employes.

6. That the careful study of warehouse costs develops the fact that the revenue produced by our last tariff in the matter of special services, storage of small lots, etc., is in many cases insufficient. This necessitates the changes made in our rules and regulations.

cover only twelve of the houses filing, but they represent a very large percentage of the space devoted to public warehousing, and the addition of the figures submitted by the balance of the petitioners would not materially change the results:

Ware		-Value of			Per Cent
h	ouse	Properties	Sq. Ft.	Earning	Earned
,	"A"	\$185,000.00	40,000	\$6,516.29	.035
	"B"	216,833.82	52,500	11,196.49	.051
	"C"	676,450.00	172,500	47,942,40	.071
	"D"	98,000.00	45,000	10,913.62	.11
	"E"	1.145,000.00	229,000	79,269,88	.07
	"Far	1,295,568.04	340,000	70,491.60	.0545
	"G"	420,000.00	100,000	8,373.85	.02
	"H"	887,200,00	360,000	83,446.26	.072
	"I"	1,380,434.37	355.000	72,716,71	.0525
	"J"	284,726,20	135,000	22,656.06	.08
	"K"	933,887.13	244,200	65,216.04	.07
	"L"	1,220,548.00	293,832	75,247.63	.0616

RECAPITULATION

Total Value of Properties \$8,743,6	47.56
Total Square Ft. Area2,36	
Total Net Earning\$533,9	
Average Earning	63%
Average Earning per Sq. Ft	.23c.
(Editor's note: In the foregoing t	able

(Editor's note: In the foregoing table the names of the twelve warehouses are filed with the Public Utilities Commission but have purposely been omitted here.)

"Your petitioners appreciate that there is at present a great deal of agitation for lower prices and reports are current of the decline in prices of many commodities, but analyses of these declines will show that they are chiefly among luxuries, or on articles which have recently been subject to a great deal of speculation.

"Storage rates must be governed very largely by building costs, land valuations, cost of building maintenances and repairs, cost of heating and current, and such other items as go into the production and operation of storage building.

Costs Are Higher

"None of these items has declined in price; in fact, they will show a very decided increase even during the last few weeks."

Taking up the third reason advanced -scarcity of space—the petition says:

"That there is a shortage of warehouse space in the city of Chicago can best be testified to by our

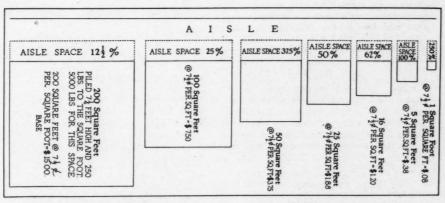


Chart filed by Chicago warehousemen with Illinois Commission, illustrating percentage of aisle space used in serving various size lots of goods piled in perfect squares. Note great increase on small lots

Three charts filed by Chicago ware-housemen with Illinois Commission. Top—Typical warehouse floor laid out for quarter-car lots, aisle space amounting to about 36 per cent of net floor area. Center—Floor laid out for half-car lots, aisle space amounting to about 25 per cent of net area. Bottom—Floor laid out for carload lots, aisle space amounting to about 15 per cent of net area.

customers, many of whom are obliged to communicate with nearly every warehouse in the city before they can find space to accommodate their goods, or delay their shipments to Chicago until space can be provided.

"In the argument filed by Mr. C. W. McDonald at the last hearing, he tabulated a number of buildings formerly devoted to warehouse space, which had been leased, showing a total of 1,196,000 square feet.

"Lack of warehouse space makes it impossible to serve the storing public properly and drives business away from Chicago."

Low Handling Rates

The argument covering the fourth reason—that handling rates were too low—reads:

"That handling rates are not sufficient to produce revenue enough to cover the cost of the various items which are actually chargeable to handling is shown by the statements of handling revenues and costs submitted by each of the petitioners. These show their revenue from all handling operations and their costs for actual warehouse labor and also for such other items as must be charged to handling.

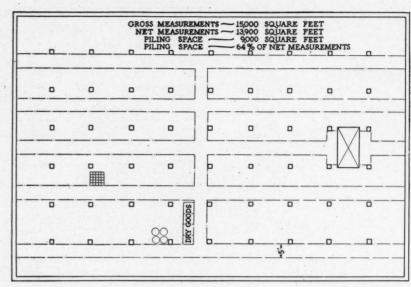
handling.

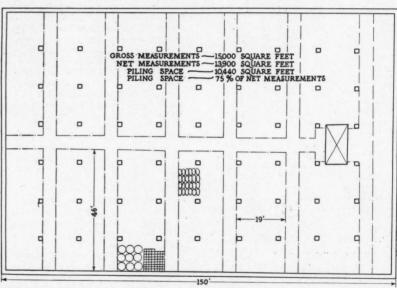
"The losses due to handling operations must be made up from the earnings from storage operations and this is very clearly shown by the figures submitted in Section 2. Our storage rates were designed to make an earning of 37½ cents per square foot of gross area per year and would have undoubtedly done so had there not been a very heavy loss from handling. The net balance left for storage earnings was only 23 cents per square foot gross area.

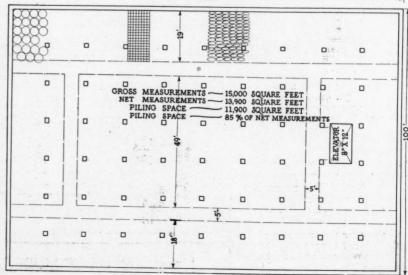
"The increase in handling charges granted October 7, 1919, and which was in operation during the last quarter of the period shown in the figures, granted some relief, but handling revenues are still too low, as shown by the returns submitted."

Wage Increases

Regarding the fifth reason—necessity for recent wage increases—the petition reads:







"The results of handling revenue and handling costs which each house submitted cover a period January 1 to June 30, 1920.

"The action of the Railroad Labor Board in increasing the pay of freight handlers and railroad workers is too well known to need any comment. A large number of warehouses are operated in close proximity to freight stations and this had an immediate effect on our industry.

"An advance of approximately 20 per cent has been necessary, in order to meet this increase."

Alluding to the sixth reason—that shippers are more and more inclined toward storing in small quantities—the petition says:

Changing Character

"There has been a great deal of change in the character of warehouse business during the past few years and the tendency of the storer has been to store goods in smaller quantities, make more prompt deliveries and demand of the warehousemen many additional special services.

"With the increased cost of handling and other expenses this has greatly increased the cost of doing business, and a careful study shows that in many cases our previous charges for the special services were too small.

"This has necessitated a few changes in our Rules and Regulations. The principal changes are in Rules Nos. 6, 8, 13 and 16. They are, we believe, equitable in every case and we are prepared to demonstrate that they are not excessive.

"In explanation of Rule No. 6 we are attaching blue prints showing the floor laid out for carload business; one laid out for half carload business; one laid out for quarter carload business; and a drawing illustrating the percentage of aisle space used on goods piled in squares, containing 200 sq. ft., 100 sq. ft., 50 sq. ft., 25 sq. ft., 16 sq. ft., 5 sq. ft. and 1 sq. ft. This illustrates the very rapid advance in the expense of storing small lots as compared with the larger lots."

To the petition was attached a list of 139 commodities generally stored, showing the old rates for handling and storage and the new rates for handling and storage, together with the percentage of increase.

THE Chicago situation dates back to January, 1920, when the Public Utilities Commission ordered the warehousemen to defend the reasonableness of their rates, charges, classifications, contracts and practices.

Inquiry Was Welcomed

Far from objecting to the inquiry which resulted, the Illinois Association of Warehousemen filed, among other documents, one in which it declared that—

"As we intimated at the outset, we have welcomed this investigation and the opportunity of vindicating ourselves from the charges that have appeared in the papers frequently that we are hoarders of food and profiteers;

and it is our intention to see to it that these proceedings are given wide publicity, not only in Chicago but throughout the country. . . .

"To sum up the evidence briefly, we believe that we have proved beyond question that rates in Chicago average lower than the average of other representative cities. We have offered evidence from twenty-five warehouses, located in sixteen different cities, covering thirteen of the most generally stored commodities, and compared their average with the highest rates charged on these same commodities by any merchandise storage warehouse in Chicago, and the tabulation shows that, on combined storage and labor for the first month, their average is 31/2 per cent higher than Chicago, and on second or any subsequent month their storage rate is on the average 34 per cent higher than Chicago."

Increases Substantiated

Thus the Chicago merchandise warehousemen not only convinced the Commission that the rates then in force were not remunerative but, through subsequent evidence and testimony, have succeeded in substantiating that increases were necessary, for the reasons set forth in the petition of October 11.

The rate committee of the Illinois Association of Warehousemen prepared the tariff allowed to become effective December 1, and the basis of it included replacement value as well as operating costs.

MR. WAREHOUSEMAN-A SUGGESTION:

THE foregoing story of how and why Chicago merchandise warehousemen obtained higher tariffs should be preserved. The day may come when State or municipal commissions in your warehousing communities may undertake supervision. If and when that time arrives, the arguments advanced by the Chicago warehousemen will be worth having for reference and use.

DOLLAR IDEAS

SEND IN AN IDEA—EARN A DOLLAR

DISTRIBUTION & WAREHOUSING will pay \$1 each for ideas for this department, which is twofold in purpose: First, it gives you an opportunity to get paid for telling the other fellow something he hadn't thought about that should help him in his business. Second, you are going to be helped by the Dollar Ideas which the other fellow sends in. Tell something of how you revised your stock report system, obtained a new customer, reduced your fire insurance, built bigger business through advertising, eliminated rodents, ironed out a labor problem, repiled your goods with profit, "slipped one over" on a competitor—how you achieved anything at all worth the telling.

The shorter the snappier-it's the idea, not the length, that counts. And-

By the way: Call this department to the attention of your employees. They may have Dollar Ideas that even you don't know about!

SEE EDITORIAL PAGE.

EDITOR'S PAGE

THE A. W. A. ELECTIONS

No one in the warehouse industry will begrudge the Central Western men the honors which their section has obtained in the elections at the White Sulphur Springs convention of the American Warehousemen's Association. The nominating committee is to be commended for placing these Western men on its slate, and the storage business as a whole will benefit by this broader representation among the association's officers and directors.

On all sides at White Sulphur Springs the feeling was general that the West was entitled to exercise more influence in the American's councils. It may be stated that prior to the convention several of the Westerners made known to the Eastern warehousemen in a frank way that the West believed it was time for that section to be more strongly represented. To the credit of the Easterners they met these overtures half way by agreeing that the desires of the men in the West were well founded: if there was any opposition at all on the part of the Eastern men, it did not come to the surface.

The conviction of the Western warehousemen that they were entitled to this larger power was based in part on the rapid stride which the storage business has made in their section of the country; in part to the growing prestige of the Central Warehousemen's Club, which has come to be a formidable rival of the American itself. Indeed, there has been talk among some of the Central's members that the Central and the American might well join forces, forming one national body with sectional associations scattered

throughout the United States.

...............

Now that the West has been given the increased power asked, obviously it is up to the West to make good. The opportunity is there. The past leadership of the East has been real and constructive; there has been progressivism, as illustrated by the development of cost accounting and the solution of many other problems. In short, the East has set a high standard, and the West must aim high and hit hard to equal what the East has achieved.

The Western men recognize that this is true; but while they have no illusions, neither have they any forebodings as to the success of the American's new administration under the guidance of Willard W. Morse.

The new president is recognized as one of the hard-headed, common-sense type of warehousemen; a man familiar with all the intricacies and problems of his chosen industry—familiar with them because he has been "through the mill" as head of a big business concern in that industry.

As a director of the A. W. A. in the past Mr. Morse has had knowledge also of what the national association is striving to accomplish; meanwhile the job as president of a warehousing association is no novelty to him, for he has been and is to-day the executive chief of the Minnesota body.

SUNSHINE!

In the other, that alert and wide-awake scrapper whose fighting name is Better Business. It ought to be a good bout—but a short one. Better Business will win by a K. O.—put your kale on him; back him, too, with your brains and your aggressiveness and the cheerfulness of your soul as the New Year begins.

Every now and then old man Depression bobs up with the idea that he is Some Battler in the biggest Prize Ring of all—American industry. To-day he is challenging the universe.

Old Man Depression hasn't got a chance against Better Business—and you know it! If he wasn't a persistent cuss himself, he'd have realized long before this that the High Referee, who watches over the destiny of beloved America, will never give him a decision over Better Business.

Now turn to page 60 and read the message of business cheerfulness which a maufacturing company is mailing to all its correspondents. We men in the warehouse industry: let's give better service than ever before—"let us get down to intensive, intelligent hard work with full faith that better business is within our grasp if we will make the effort."

Let us, as bankers of a mighty nation's products, "find the silver lining now!"

DOLLAR IDEAS

WHEN you send us one of these (see page 29) it isn't because you are after the dollar; it is because you hope that you, by doing your part in making this department a success, will be able to learn something worth while from the texts "the other fellows" are contributing.

The Dollar Idea Department will become valuable—and invaluable—only as the industry will co-operate to make it so!

fo

OI

Do Your Part!

TWO BITS

A Bit Here

A Bit There

Vol. 1

Gotham, January, 1921

No. 7

S. G. SPEAR GIFTED WITH **ELEGANT INSURED WATCH**

(Special Wireless to Two BITS)

WHITE SULPHUR SPRINGS, Dec. 7 Sam'l G. Spear, the Boston warehouse cost finder, was gifted to-night with an elegant new watch with knife and pencil attachments, at the American Warehousemen's Convention, on behalf of the Central Bureau Committee.

It seems the members of the Committee was under suspicion of having stolen a time-piece from Mr. Spear, who lost his regular watch while the Committee was meeting at Minneapolis a few months ago. Whoever took the watch on that occasion was reluctant to confess his crime, so the members chipped in and bought a new one and thereby as a body exonerated themselves.

Mr. Spear received with the new watch the most unique insurance policy ever underwritten in the history of the warehouse industry. The author of the text is D. L. Tilly of Gotham, who as a member of the Committee was one of those under suspicion. The policy reads:

"In consideration of the stipulations hereinafter named, and the sum of ONE DOLLAR, lawful money of the United States, and other valuable consideration, the receipt whereof is hereby acknowl-edged, does insure SAMUEL G. SPEAR, his heirs, administrators, assigns, chil-dren, grand children, great (ad infinitum) grand children, great (ad infinitum) grand children, and any other person or persons directly, indirectly or remotely interested or disinterested in the subject matter of this insurance, but excepting and excluding any and all persons now or ever resident at Englewood, Illipois, from the sighth day of December. Illinois, from the eighth day of December 1920, to the 30th of February, 2019 under the following terms and conditions, to wit:

"ONE (1) perfectly good HAMILTON Watch, containing twenty-three jewels or near jewels, gold case, open face, together with its wheels, springs, axles, bearings, differential, transmission, dial, fingers, caricatures and all other fittings, meching and an extended to the second seco machinery and attachments thereunto be-

"All risks of loss, damage or injury, while being carried, transported or assisted, ashore or afloat, in the air or under the earth, including theft, fire, riot, discussions on cost accounting, commotion, hysterics, measles, whooping cough, and cockroaches, except as hereinafter provided.

"This company shall not be liable for loss or damage to the property hereinbefore described while the assured is in or on any public or private street, road, avenue, park (meaning thereby the thoroughfares leading from one place to another, except in the City of Boston, State

of Massachusetts, U. S. A. where the thoroughfares lead only to confusion) or while in any office, building, hotel, house, home or domicile, theatre, cave, cavern or place of entertainment or refreshment or while in or on any train, vessel, street car, taxi-cab, automobile, airplane, hydroplane, balloon or any conveyance of any nature or kind whatsoever, and especially while within the confines of the Englewood aforesaid.

"The assured warrants that during the

"1. Engage in the business of Public Warehousemen or Terminal Company.

"2. Indulge in the game of cards known as Casino, whether for gain, loss

or pastime. Associate, communicate, collaborate, mingle, or in any way come in contact with or recognize any individual engaged in the business of Public Warehouseman or Terminal Railway, particularly any member of the American Warehouseman warehouse and warehouse warehouse and warehouse w housemen's Association the hazard of such being especially prohibited by this contract.

The assured warrants that at all times during the life of this contract the property herein described will be kept in a fireproof and burglarproof vault, with approved time lock, and at least two armed guards on duty day and night.

"Failure to comply with the above war-

ranties will operate to forfeit any and all rights of recovery hereunder.

"In case of loss, damage or injury to the property described herein, the assured shall forthwith notify the Police Department and the Fire Department and summon an ambulance; employ at his own and regardless of expense a class detective agency which shall be kept on the job until the article is found. If not found, all rights hereunder shall be forfeited.

"After compliance with the foregoing, the assured shall prepare in minute detail, and attest before a Justice of the United States Supreme Court, a state-ment setting forth where, when, how and why the loss occurred, the past history of the assured and his future expecta-tions. When the said statement is completed assured shall reduce it to small fragments and deposit them in the family furnace on the top of a hot fire.

"No suit or action for the recovery of

any claim under this contract shall be maintained in any court or law or equity on any grounds whatever.

"ATTACHED TO AND FORMING PART OF POLICY NO. 0000001.

"AMWARE AND CENTBUR, UN-DERWRITERS,

"Minnie and Louis"
"AGENTS."

NEXT MONTH

An elegant photograph of L. T. Crutcher's Office Kittens.

WINTER ON CAPE COD

By Kent B. Stiles

Scrub oak, young birch and struggling pine Grow up companions from their birth: The apple trees in each farm yard Squat crookedly upon the earth.

Crimson the leaves upon the oak; The birch's bark is white and spotted; The pine stands green and needle-gowned; Those apple boughs are gnarled and knotted.

Brave rivulets of salty blue— Come inland from the sparkling bay. Are filmed with ice along their shores, And sea gulls tarry here and play.

A lowland bog, close by the road, Recalls where red cranberries were; Each narrow ditch is frozen now— The cripsing leaves are scarce astir.

A stony field of yellow sand Lies numb with stunted stalks in rows. The scareman. Summer's garb wind-strewn, Must bear the scoffing of the crows.

In woodland hollows, vines await
The coming of the Spring-sun's glow
To move their sap expectantly—
For here pink May-flowers will grow.

No artist that I know could find— Though he might roam throughout the land— Another spot as this Cape Cod Was painted by the Master Hand.

NEWS ITEMS

Certain members of the w'hsing fraternity will appreciate the delicacyyea, even the judgment-displayed by whoever hands out the auto licenses in Mo. The number on Dan Bray of Kansas City's machine contains three nines & a pair of eights.

Wedding chimes was heard resounding in Minneapolis the 1st of last mo. (Dec.), on a/c W. A. Morse was wedded. Here is hoping the charms of matrimony never wane & wilt, W. A., which we hear they do for some, tho not in our own case so far as we are willing to admit.

Bill Ford of Dallas is building a cost finding table on the relative specific gravity of water-on a cu. ft. of water as a natural base. This will be an awful blow to the alcohol mfgrs., Bill.

Sam Woodson of Kansas City has got a good joke on the sugar interests, we hear as how. Sam traded in a 2ndhand auto for a defunct sugar refinery during the war vs. Wm Hohenzollern. Well, somebody since put the refinery on its financial feet-on its sq. ft., so to speak-& Sam is kept busy counting the dividends & is in the mkt for a new auto. Who put the fun in defunct, is what Sam is inquiring.

UNIFORMITY IN POOL CAR HANDLING

To Be Undertaken by the American Chain of Warehouses for the Benefit of the Shipper

> Here is the story of the Chain's 1921 Convention held at White Sulphur Springs

> > WHITE SULPHUR SPRINGS, W. VA., Dec. 7.

NIFORMITY of arrangement in the handling of pool cars for shippers will be undertaken by the American Chain of Warehouses for its members. A committee to work on this problem was appointed by Alton H. Greeley, president of the Chain, at the organization's tenth annual convention, held to-day at the Greenbrier Hotel here. On this committee are: Chairman, W. Lee Cotter, Cotter Transfer & Storage Co., Mansfield, Ohio; John Bekins, Omaha Van & Storage Co., Omaha, Neb.; Robert L. Spencer, Duquesne Warehouse Co., Pittsburgh; Anson M. Titus, Quincy Market Cold Storage & Warehouse Co., Boston.

At the suggestion of Mr. Spencer the convention decided to co-operate in working out uniformity, with the Shippers' Warehousing and Distributing Association. The secretary of the shippers' body was present and was asked to bring to the attention of that association the fact that a Chain committee on uniformity had been appointed, with the suggestion that the distributors appoint a similar committee

[The action taken by the American Chain of Warehouses has been formally brought to the attention of each director of the Shippers' Warehousing and Distributing Association. John Simon, president of the distributors' body, has under consideration the proposal to appoint a special committee to work with the Chain's representatives.—Editor.]

Frank Rochambeau, New York, the Chain's secretary, brought up the question of uniformity, citing the linoleum manufacturers who wanted uniform distribution rates so they can add it to the freight rates and thus place themselves in a position where they can invoice customers and instruct salesmen as to what prices to make on their products.

CONVENTION FEATURES

HERE is a nutshell report of What took place at the White Sulphur Springs convention of the American Chain of Warehouses:

1. The Chain approved a plan to work out uniformity of arrangement in handling pool cars for shippers.

2. The uniformity committee will co-operate with the Shippers' Warehousing and Distributing Association

3. The Chain's directors will decide on the advisability of employing a traveling representative to visit both members and shippers with a view to building the Chain's influence and power among distributors.

4. The 1921 directory will contain key and telephone numbers as new features.

5. Nine new members were elected, making 102, including applications pending.

It was brought out during the discussions that one difficulty in the way of arriving at uniformity was the fact that some warehousemen have the advantage of trap cars, while others are compelled to make long hauls. In this connection George S. Lovejoy, Boston, said the warehouseman should charge flat rate for teaming; that by thus separating the warehouse charges

manufacturers who wanted uniform from the team tariffs it would be distribution rates so they can add it to easier to arrive at uniformity.

The directors will decide on a suggestion that the Chain employ a traveling representative. W. W. Morse, Minneapolis, discussing means of binding the Chain more closely, urged need of close supervision of the individual members in the matter of distributing for shippers and jobbers—to insure handling of accounts in uniform ways so as to give proper service. It would be a great help, Mr. Morse said, if the Chain could have a traveling representative who would be continually in touch with the secretary's office, call upon shippers, hear their complaints and attend Chain meetings and report the causes of dissatisfaction. The traveling representatives could visit Chain members and acquaint them regarding features of service accorded to shippers by other members, Mr. Morse suggested, and the general policy would increase the influence and power of the Chain among distributors.

Mr. Morse alluded to the system being tried by the Procter & Gamble Distributing Co.—a system which was described in September issue of Distribution & Warehousing. The keynote is the elimination of the jobber's services in favor of those of the warehouseman.

Other national distributors were closely watching the Procter & Gamble experiment, Mr. Morse said, and were preparing to follow it if it proved successful.

Mr. Greeley said the board of directors had for several years had in mind a plan to have a traveling representative and said Mr. Morse's suggestions could be carried out if supported by the members. He recalled that the American Warehousemen's Association adopted such a plan suc-

cessfully a number of years ago.

Mr. Greeley said also that he looked forward to the day when the Chain would maintain an office at San Francisco. S. J. Beauchamp, Little Rock, Ark., declared there was a great amount of freight emanating from San Francisco and Los Angeles which Chain members to the East should have.

Speed in preparing data which will be published in the Chain's 1921 directory was urged upon the members. The edition will be published early in the new year. New features will be a key number for each member, to enable the members to trace origin of new business: and the telephone number of each member, for the information of shippers. There was discussion of a suggestion that on each member's page should be published a table showing class rates from member's town to surrounding cities. The proposal was not adopted, owing to the fact that freight rates are so frequently subjected to changes, and the directory is a year-'round document.

Labor and Rates

The labor situation and warehouse rates were discussed. It was brought out that shippers generally appear to believe that warehouse costs are on the decline, and that accordingly handling tariffs at warehouses should decrease proportionately. One warehouseman said he received a letter from a shipper asking when he was going to reduce rates. He replied that he had never profiteered, and had no intention of reducing rates. James G. Perkins, Albany, N. Y., pointed out that assessed valuation on warehouses was increasing, as was the tax rate, and that repairs were 150 per cent higher and that overhead expenses generally were higher. The opinion of the members was that the time had not come for it to be yet possible to lower rates. Attention was called to the action of the Public Utilities Commission in Illinois in allowing rate increases at this time. [See article beginning on page 26.]

New Members

The report of Mr. Rochambeau as secretary showed he made 907 personal calls during the past year. He announced a present membership, including applications pending, of 102, taking into account four resignations, the dropping of three warehouses for non-payment of dues, and election of nine new members—Merchandise Storage Co., Columbus; Western New York Storage Company, Binghamton; Green Bay Transfer & Storage Co., Green Bay, Wis.; Bakersfield Truck & Storage Co., Bakersfield, Cal.; Southern Bonded Warehouse Corp., Petersburg,

Va.; Oshkosh Storage Co., Oshkosh, Wis.; Cotter Transfer & Storage Co., Mansfield, Ohio, and Union Fireproof Warehouse Co., Akron, Ohio; Waco Transfer & Storage Co., Waco, Tex.

Mr. Rochambeau read an extract from a letter from a member to illustrate the value of the Chain:

"We feel that the distinctive feature of the Chain will always be our best card and that a member of the Chain will continue to have more and more prestige with the big shipper. To show the value of our membership, will state that we were approached recently by a local competitor with a proposition to buy our membership. They asked us to state our price, which of course we refused to consider. We think, however, that it is a high compliment to the Chain."

The names of 4832 shippers who are actually using warehouses is in the Chain's possession, said Mr. Rochambeau, who gave the following résume of business conditions as of interest to the warehouse industry:

That pool cars make up the major part of distributors' business; that manufacturers for the most part are producing for immediate needs; that they are sending out little for storage; that business is so uncertain as to the coming year that many shippers are behind in production, but that they are expecting a revival late in the coming spring; that at present merchants cannot make even a fair guess as to prices for the near future and that therefore stocks are being kept at the minimum and few orders are being sent in; that a large part of earlier orders have been cancelled, causing mills and factories to close down or work on part time, and that it was only natural that this condition should affect labor and cause a lowering of the wage scale.

Directors for 1921

Directors for the new year were chosen as follows: John Bekins, Omaha Van & Storage Co., Omaha, Neb.; William H. Gibson, F. C. Linde Co., New York City; Alton H. Greeley, General Cartage & Storage Co., Cleveland; William L. Hinds, Merchants' Transfer & Storage Co., Des Moines, Iowa; S. M. Haslett, Haslett Warehouse Co., San Francisco; George S. Lovejoy, Quincy Market Cold Storage & Warehouse Co., Boston; W. W. Morse, Security Warehouse Co., Minneapolis.

P. F. Cassidy, in his report as the Chain's Chicago representative, reported that Chicago's warehouses had been generally filled and that some of these warehouses "seem inclined to favor propositions on the space rental basis instead of storage and handling, claiming that this produces more revenue and with considerable less worry and expense." Among Chicago's new

warehouses Mr. Cassidy alluded to the Griswold & Walker plants, which were described in the November issue of Distribution & Warehousing. Mr. Cassidy continued:

"During the year we have received many requests for placing accounts in Chicago and have in some way or other succeeded in taking care of these propositions with the assistance of various warehouses who stretched a point in order to assist the patrons and ourselves, and of course in some instances we had to use warehouses some distance from the business center."

"Prompt Service"

Mr. Cassidy said that at all times he endeavored to show pool car shippers that they "must not lose sight of the prompt service which our houses render, and while competitors may quote lower rates, such rates do not always mean the kind of service that the shipper insists on."

The report by Mr. Cassidy continued:

"With one exception I have not run across any serious difficulties as to shippers objecting to the warehouses discontinuing season rates, and I believe that this year some members have suggested a space arrangement to shippers who insist on a season rate, and I believe this is a splendid opportunity to try out such handling in behalf of both the patron and the warehouse.

"The Chicago shippers seem to be falling in line as to the weight and measurement basis now used in so many cities and we are not having any difficulty in getting this information in order to quote rates and the fact that we can show shippers various warehouse tariffs arranged so as to give rates on the above basis is of considerable assistance, and I certainly appreciate our members keeping this office supplied with copies of such tariffs both as a matter of general information as well as enabling me to name rates on request and to back up such quotations with the information . given in such tariffs.

Flat Rate Problem

"Recently we have received some propositions covering storage and distribution of commodities shipped to the warehouse in LCL lots for reshipment and local deliveries, and while these packages vary in size and weight, yet shipper desires and insists on one rate to cover all packages, which they claim is necessary so as to avoid additional bookkeeping on their part as well as for commercial reasons covering the manner in which they make a stated charge to their customers in their territory, divided into probably three or four zones, although in one zone they may be using a number of cities for this service.

"A few complaints have been made by patrons claiming they are not receiving promptly monthly statements from the warehouses covering storage and other charges, and I have explained in such instances that such delays were caused by the great amount of work that had to be done at the various warehouses which made it impossible to get all these statements out on time, and in such instances will be glad to advise our Chain members because, of course, the shippers also have to arrange their affairs covering bookkeeping and other records and always desire to have these statements and inventories reach them on time.

Stop-off Privilege

"I believe some of our members enjoy stop-off privileges on various commodities, and if so I would suggest that they keep this office supplied with tariff and other rates covering such particular handling, because in different territories only certain commodities are covered by this arrangement and this will enable us to specialize with shippers of these particular goods, and I notice during this year we have had requests of this nature from shippers who could not be ac-

commodated with storage in certain cities and in such instances we suggest that they endeavor to have the cars handled at some other point where we have Chain houses.

"I, of course, know that this stop-off arrangement is now under consideration by the various railroads, who from time to time endeavor to have it discontinued, and I will keep in touch with the matter as to any meetings they hold in Chicago and will be very glad to keep the interested Chain houses advised of any new developments.

Miscellaneous

"During the year we have received requests to arrange for storage and distribution in a number of cities, but on which our Chain houses could not do the needful thing owing to their crowded condition, but in such instances our member has gone to the trouble of advising the names of one or two other warehouses who, of course, are their competitors, who might be able to handle.

and many times this has resulted in the shipper being taken care of, and I wish the Chain to know that such shippers have appreciated this action on the part of our members, and I certainly trust it will later on result in something beneficial to the houses that have given this assistance.

In Memoriam

"I have also received many compliments indeed in a general way as to the attention and service being given by the Chain houses, and I am very glad that our patrons have such a feeling in our behalf, and this is very true, because I notice many of them who are using the Chain houses always take up with other Chain representatives or ourselves when they are figuring on new accounts in other cities."

The convention adopted a resolution expressing sympathy because of the death of Ernest H. Tripp, who was president of the Tripp Warehouse Co., the Chain's Indianapolis member.

INDUSTRIAL SELF-LOADING TRUCK OF IMPROVED DESIGN PLACED ON MARKET BY COWAN COMPANY

A N Industrial self-loading truck of greatly improved design has been put on the market by the Industrial Truck Co., a division of the Cowan Truck Co., Holyoke, Mass., and is illustrated herewith.

This machine is all-steel and guaranteed for 5000 pounds capacity, which is 1000 pounds greater than the usual guaranteed load for this type of truck. A further description furnished by the company says:

"It is believed to have the quickest acting elevating mechanism of any similar truck on the market. It elevates in *five seconds* when equipped with 28 cells and in six seconds with 21 cells.

"The lifting mechanism is operated by an independent, heavy duty, series-wound motor and worm gear reduction. The platform lifts vertically, the rise being 4½ inches.

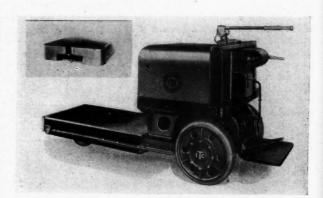
"The platform may be stopped at any point going up or down, and it requires only three seconds for full lowering.

"The rear end is equipped with a heavy humber which

"The rear end is equipped with a heavy bumper which effectually takes all shocks and protects the rear end of the lift platform. The rear end is also equipped with a draw bar attachment which enables the truck to be used as a light duty tractor.

"Automatic brake and circuit breaker application, four wheel steer, single reduction worm drive of the power axle and easy accessibility of batteries, lifting, driving and control mechanism are features of the truck. It will operate in intersecting aisles 60 inches wide.

"The turning radius extreme outside point is 7 feet 10 inches. By folding the foot pedal and steering handle into a vertical position the overall length is shortened for use on elevators. The length is 102 inches over all or 91½ inches with step raised. The width is 36 inches over all and 51 inches



Improved type of Industrial self-loading truck designed and manufactured by the Cowan Truck Co. of Holyoke, Mass.

high over steering shaft head. Either alkaline or lead batteries are used. The controller is of the drum type with three speeds forward and three reverse.

"This new truck has been subjected to most rigid tests under every conceivable operating condition, and its all-steel construction, low center of gravity and general compactness and ruggedness have amply demonstrated that it will be capable of enduring service."

LOS ANGELES TO HAVE \$1,000,000 WAREHOUSE

LOS ANGELES, Dec. 14—A one-million-dollar unit, comprising a seven-story warehouse, is to be added to the Los Angeles Union Terminal. A permit for erection was issued to-day and the new structure may be ready in June for occupancy.

The warehouse will be 600 feet long, have frontage of 100 feet, contain floor space of 450,000 square feet, and will be equipped with automatic fire sprinkler system, electric elevator, automatic handling equipment, spiral chutes, and of-

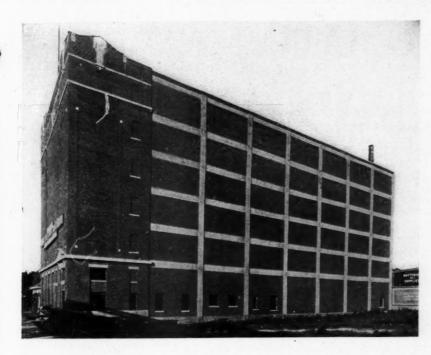
fices for sales forces and agents of manufacturing and distributing firms.

When the unit has been completed the Los Angeles terminal will be the second largest of its kind in the world—next to the Bush Terminal in New York.

WHAT'S WHAT IN NEW BUILDINGS

XV.

United Fire Proof Warehouse Co. Milwaukee



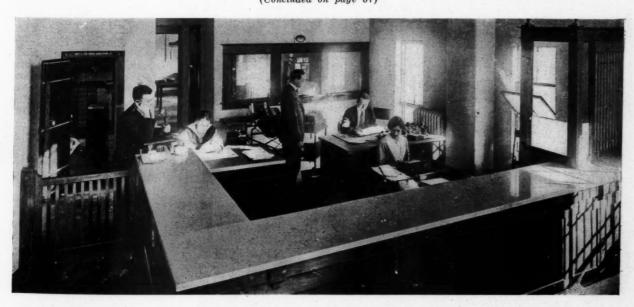
OCATED in the L heart of one of Milwaukee's finest residential districts, the new furniture storage structure of the United Fire Proof Warehouse Co. is built throughout of steel and concrete, with elevation of fourinch red face brick with bedford stone trimmings, the walls being backed by eight-inch hollow tile, making it as free from moisture and dampness as modern engineering and architectural skill will permit. The warehouse is at 392 Prospect avenue, with sixty-foot frontage on Prospect avenue by one hundred

and fifty feet in depth; and with an unloading house with frontage of fifty-six feet on Woodstock place, with sixty feet of depth. Each building is fireproof.

The warehouse is equipped with one large freight elevator for handling of

furniture, and a passenger elevator for exclusive use by patrons.

Flat slab is the type of construction of the warehouse, doing away with all beams and girders. Window frames and sashes are of steel; door frames are of channel steel; doors throughout are either metal clad or steel rolling shutters bearing the underwriters' label. Building is designed to accord security and low
(Concluded on page 57)



STANDARDIZATION OF BASIS FOR MAKING RATES*

These Complete Reports of the Central Bureau Committees of the Merchandise and Household Goods Sub-Divisions of the American Warehousemen's Association Are Copyrighted by the A. W. A.

SERVICE: MAKE IT REMUNERATIVE

The keynote of standardization of basis for rates may be said to be:

"Every service rendered should be remunerative to the warehouse. To give anything for nothing necessitates an overcharge somewhere else."

WHITE SULPHUR SPRINGS, W. VA., Dec. 10.

ERE are the convention developments in connection with the work of the Central Bureau Committees of the American Warehousemen's Association:

1. Merchandise Sub-Division. Committee (a) brought up to date the 1918 standardization of basis for making rates; increasing costs and changing conditions, having made the former document obsolete in 1920; (b) worked out a "standard warehouse" constructed in 1920, showing initial cost of plant with estimated capital, fixed charges, operating expenses, operating revenue and net return, "as a conservative illustration of the rates required to produce a reasonably adequate return" on such warehouses; (c) promulgated standard warehouse rules and regulations for the conduct of the general merchandise storage and handling industry; (d) provided a system of uniform cost accounting. All four texts were included in one document, which is being distributed to warehousemen.

2. Household Goods Sub-Division. Committee submitted (a) outline of warehouse accounting system; (b) illustration of "standard furniture warehouse" based on present cost of reproduction. These two texts are in one document, which is being distributed to household goods warehousemen.

3. Cold Storage Sub-Division. Committee confined its report to a review of its labors. It announced that its standardization of basis for rates was nearing completion, the committee hoping it would be ready for publication early in the spring; owing to the allied interests of cold storage and merchandise warehousing, the principles being followed are those already laid down by the merchandise committee.

MERCHANDISE COMMITTEE'S REPORT

THE merchandise Central Bureau Committee, T. E. Witters, Raltimore, chairman Witters, Baltimore, chairman, explained that the standardized basis for rates was designed to enable the individual warehouseman to "compute rates that would be equitable as between different commodities in his warehouse; rates that would produce the same net revenue from each and every class of goods whether stored in bulk or assortment, in quantity or in small lots." The committee, the report emphasized, assumed that-

No Uniformity of Price

"Not only was it no part of their duty to attempt to produce uniformity of price as between different warehouses, but that it was imperative that they do nothing that would indicate or suggest a combination to establish such uniformity; to do so, whether or not it could be construed as a combination restraint of trade, would be directly contrary to the evident intent with which they were appointed."

The committee's most pressing duty, it was explained, was to modernize the 1918 standardization "in view of the

increase in cost, both of construction and operation, the

growing demand for services other than simple storage and handling, and the great advances we have made in our knowledge and understanding of warehouse expenses, customs and economics."

The committee state that the theory of the back piling of goods in assortment has been abandoned "for the reason that the vast majority of building laws and regulations do not permit overloading any floor space to counterbalance underload or vacancy on adjoining space"; and that the car lot and assortment system has been replaced by the lot unit system because "existing R. R. classifications are found to be inequitable and indefensible when applied to goods in warehouse." For similar reasons several other changes, minor ones, have been made.

"Know Your Business!"

Alluding to the package rating table (on page 42), the committee say that this may be used in preparing tariffs, but that "it must be borne in mind that each warehouseman must 'set' the table in accordance with his desired earnings per square foot, just as he must set his watch according as he desires Eastern, Central, Mountain or Pacific time."

Conceding that it is inevitable that their report will

*Copyright, 1921, American Warehousemen's Association, Pittsburgh, Pa.

appear complicated to the novice in warehousing, the committee declare:

"Just as an engineer requires a knowledge of mathematics, a lawyer a knowledge of law, a banker of a knowledge of finance, so a warehouseman requires a knowledge of the fundamental principles of his business, and none of these may be acquired without study. There is no royal road to learning; no warehousemen's guide can be prepared that would enable a neophyte to become a warehouseman without preparation, experience and study, and as Mr. Dooley says, ''tis better so.' This report is of value only to those warehousemen who 'want to know' and are willing to work for knowledge. Your committee have worked long and hard to prepare it, but their labor will have been in vain unless you are willing to master and apply the results so far as they are directly applicable to your particular business, and to continue and modify them as your individual needs may require."

The committee assert in conclusion that if their system of cost accounting and basis for tariffs is intelligently carried out it will give the warehouseman knowledge of income, cost and profit of (a) maintaining and operating each unit of warehouse space; (b) handling each lot of merchandise from sill to sill; (c) loading and unloading cars; (d) weighing, sampling and all other services for which separate charges are made to the customer. These fundamental facts, the committee declare, "will be of untold assistance in quoting and defending prices and setting a new and higher standard for the entire industry."

It may be stated that the committee worked along the general lines that warehouse rates should be high enough to enable employer to pay living wages and to make the industry sufficiently remunerative to attract men of education, college men, into the business. The basis is offered as a formula only, each warehouseman to apply it to his own business. Identified with Mr. Witters on the committee are John Bekins, Omaha; C. W. MacDonald and S. H. Verrall, Chicago; Edwin Morton and D. L. Tilly, New York; S. G. Spear, Boston; George Hamley, Minneapolis; E. H. Bacon, Louisville; R. W. Dietrich, New Orleans.

The report follows:

EXPLANATION OF TERMS

Standard Pile is a pile containing the greatest quantity of a commodity that can be practically stored in bulk, not exceeding 81/3 feet high nor 250 pounds per square foot of floor space occupied.

Lot Unit (L. U.) is the quantity of a commodity contained

in a standard pile covering 120 square feet.

Height of Standard Pile is the theoretical height of the standard pile as computed from the gross weight per cubic foot of the commodity in pile. When it is not practical to pile as high as the theoretical point indicates, then the practical height is substituted.

Floor Load is the weight of a pile of goods per square foot

of floor space occupied.

Index is the number of square feet of floor space occupied by a package in pile when stored to the maximum practical pile height (not exceeding 8½ feet), weight not considered. Density is the weight per cubic foot of a commodity.

Assortment. A lot of goods is said to be in assortment when it contains more than one mark, brand or size to be stored and accounted for separately.

Pile Space is the floor space actually occupied by a pile of

goods exclusive of entrance aisles made necessary by assortment or individual package delivery.

Available Space is the total floor space inside of walls after deducting elevators, stairways, office, shipping and laborers' rooms.

Occupiable Space is the available space less main, or permanent, aisles and columns.

Gross Space is based on outside measurement of building and includes space occupied by walls.

Honeycomb is the state, or condition, of a pile when partial delivery has reduced the number of packages in pile without proportionately reducing the floor space occupied.

Individual Package Delivery, sometimes called "Serial Number Delivery," is assortment carried to its extreme, wherein every package must be stored and accounted for separately.

Base Class is computed on not less than a lot unit of one mark, brand or size to be stored and accounted for separately.

Productive Labor Cost is the wage cost of laborers and checkers while actually engaged in an operation for which a charge is made.

STANDARD WAREHOUSE RULES AND REGULATIONS

1. Packages. The warehouse undertakes to store and deliver

goods only in the original packages in which they are received.

2. Tender for Storage. All goods for storage are to be delivered at the warehouse properly marked and packed for handling, and the storer shall furnish at or prior to such delivery a manifest showing marks, brands or sizes to be kept and accounted for separately. Otherwise the goods will be stored in bulk or lots at the discretion of the warehouse and will be billed accordingly.

3. Warehouse Receipts. A warehouse receipt will be issued on each lot of goods stored. No charge will be made for the

issuance of non-negotiable receipts.

4. Storage Periods. Unless otherwise provided, all commodities are stored on month to month contracts, and the warehouse reserves the right to require the removal of any goods within thirty days from next storage date. Only such notice as is reasonable or possible under the circumstances is required on perishable or hazardous goods.

5. Storage Rates and Expiration. Storage rates cover warehouse space required for one month or fraction thereof, dating from receipt of the first package, and are charged in advance from that date up to but not including same date of the following month. When the final expiring date falls on a Sunday or legal holiday, the next business day shall be deemed the expiring day.

6. Transfers New Contract. When goods in storage are

transferred on the books of the warehouse from one party to another, a new contract is made thereby and a new storage date established on the date of such transfer.

7. Bonded Stores. Due to the extra expense of operating Bonded warehouses, an extra charge over regular storage, handling and other rates will be made for bonded merchandise.

8. Insurance. Storage rates do not include insurance of any

8. Insurance. Storage rates do not include insurance of any kind and insurance rates, if quoted, are not guaranteed.

9. Limited Liability. Liability of the warehouse for loss of

9. Limited Liability. Liability of the warehouse for loss of or damage to goods stored shall in no case exceed eight dollars (\$8.00) per cubic foot or twenty-five (25) cents per pound, according as weight or size determines the rate, unless excess value is declared by the customer at the time the goods are stored. A charge will be made for such excess value.

10. Responsibility of Warehouse. The responsibility of the warehouse is defined by the laws of the State.

All goods are stored at owner's risk of loss or damage by civil or military authority, or insurrection, riot, strikes, enemies of the government, sprinkler leakage, flood, wind, storm, fire, moth, corruption, depredation of rats, mice or vermin, change of temperature, or by any cause beyond the control of the warehouse.

The warehouse will assume no responsibility for concealed damage, leakage of liquids, or for losses in weight by reason of defective or insufficient containers whether occurring when goods are on storage or are being handled, nor for failure to detect or remedy the same.

All storage, handling or other charges must be paid on goods lost, damaged or destroyed.

11. Access to Goods. Customers, their representatives or workmen will not be allowed to have access to or work on goods in store unless accompanied by a warehouse employe, for whose time a charge will be made.

12. Delivery Orders. Orders signed in full and in writing will be required for the delivery of all goods, and reasonable precaution shall be taken by the owner in order that the warehouse may know definitely the goods desired and make proper delivery.

13. Excess Deliveries. A charge will be made for an excessive number of deliveries from any one lot.

14. Time for Effecting Delivery. When goods in store are ordered out, a reasonable time shall be given the warehouse to execute the order. Inability to effect delivery before expiring storage dates shall not prevent assessing the storage charge for another month.

15. Handling. Handling charges cover only the ordinary labor and duties incidental to receiving goods at warehouse door, stowing and delivering at warehouse door, and do not include loading or unloading cars, trucks or other vehicles. Handling charges will be billed with the storage charge for the first month.

16. Unloading Cars. Charges for unloading cars include the use of tracks, platforms, etc., and the labor of unloading.

17. Loading Cars. Charges for loading cars cover the use of tracks, platforms, etc., and the labor of loading cars.

18. Demurrage. Demurrage will not be absorbed by the warehouse, but diligence will be used to load or unload cars promptly.

19. Distribution. Distribution charges cover the checking out and delivery of goods at car within the time specified by the warehouse. Previous to the unloading, notice shall be given stating the number of packages wanted, brands, sizes, etc., and to whom they are to be delivered. The charge for distribution is additional to the car unloading.

20. Drayage. Drayage charges cover ordinary cartage of goods and delivery at platform or sidewalk. When delivery is required in basement or on upper floors or other inconvenient places, an extra charge will be made.

21. Shipping. Shipping charges cover billing, marking or tagging, procuring bills of lading and mailing same. A sepa-

rate charge will be made for each express or parcel post shipment.

22. Furnishing Space, Light, Tools, etc. Whenever warehouse space, light, power, tools or material of any sort are supplied or loaned by the warehouse, a charge will be made therefor.

23. Weighing, Sampling, Coopering, etc. A charge will be made for weighing, sampling, coopering and other miscellaneous services when performed by the warehouse.

24. Extra Labor. Charges will be assessed for extra labor furnished by the warehouse, whether common, skilled or clerical.

25. Taking Down, Repiling, etc. When goods are taken down and repiled in store for weigher or other convenience of customer, the handling charge of receiving and delivering will be applied.

26. Collections. A charge will be made for making collections for customers.

27. Cash Items Advanced. Freight and other cash items advanced become a lien on the goods stored, and are payable on demand. A charge for this service will be made. Deliveries or transfers from such lots will not be made until lien is satisfied.

28. Stock Statements. Stock statements submitted in duplicate by customer will be checked with the books of the warehouse without charge.

A charge will be made for warehouse checking or stock taking.

29. Gross Weights. When rates are quoted by weight, they will be computed on the gross weight.

30. Ton. The term "TON" when used means two thousand (2000) pounds.

31. Minimum Charges. Minimum ratings will be applied on storage, handling or other service charges.

32. Postage. Postage and addressed envelopes must be furnished by customers requiring notification of shipments or deliveries and reports.

33. Charges Due. All charges become due when billed.
34. Labor Disputes, Strikes, etc. The warehouse will not be responsible for delays in receiving or delivering merchandise by reason of labor disputes, strikes or any other causes beyond the control of the warehouse.

35. State Laws. Nothing herein contained shall be deemed a waiver or modification of the rights of the warehouse under

the laws of the State.

STANDARD BASIS FOR CLASSIFICATION OF GOODS FOR STORAGE

The infinite variety of packages offered for storage, varying in weight from ten to three thousand pounds, in size from one-half to one hundred and fifty cubic feet, and in shape from perfect symmetry to the irregularity of an uncrated piece of machinery; the wide variation in the nature of the commodities and the consequent different requirements as to care, location and handling, and the great difference in value, all combine to make classification a complicated and difficult task. We believe, however, practically all of the goods offered for storage can be properly classified, and in a manner that is comparatively simple for the operating force.

It is all important that the factors used in any classification shall rest on a defensible foundation, and serious consideration has been given to the work along this line, particularly to the questions of height of pile and floor load, and laws relative to use and occupancy when once these two points are fixed. Certainly no classification could be of value that did not comply with the law and the insurance regula-

The basis of this classification for storage is the greatest commodity quantity that can be practically stored in bulk on 120 square feet of floor space not exceeding 250 pounds per square foot or 8\% feet high.

The classification table herewith is arranged to produce respectively gross storage earnings of 6.25, 7.56, 10.07, 12.18, 14.74 and 16.21 cents per square foot per month and intended to meet various costs and conditions, the first covering con-

struction and operation of Standard Warehouse in April, 1916, and the last covering construction and operation of same warehouse in September, 1920, but it can easily be rearranged to produce earnings varying by 10 per cent steps to cover any desired earning per square foot.

Less Than Full Lot Unit Quantity

The demand for service of various kinds makes it necessary to provide a segregation of the quantity adopted for the base classification, and here we are confronted with the complicating factors of assortment, decreased piling height due to instability of pile in small unit, excessive honeycomb, excessive delivery costs, etc.

It is no longer a theory but a fact, that a serious matter confronts the industry with the changed character of the business offered warehousemen in recent years, enhancing costs very materially and adding much to the warehouseman's responsibility.

Statistical data are fundamental and although cost accountants have recently revealed many facts on costs of specific services pertaining to storing and handling goods, particularly in small units, yet it is practically impossible to combine the known facts in a formula that will in all cases do justice to storer and warehousemen alike without an excessive amount of special charges, complicating the rating system and not desired by either party.

In view of this present and ever-increasing demand for

service it is manifestly unjust to apply to all receipts the average cost of storing or handling a commodity under all conditions, and the result of such practice must be obvious to all thinking warehousemen.

The situation demands that warehousemen meet this condition in some practical way, and after due consideration of all information available it seems best to assume that the storer who elects to store his goods in small units is dealing with the warehouseman in a retail way and therefore should bear the burden, an assumption that may or may not be true in specific cases but nevertheless is representative of the trend of costs and a recognized principle in commercial activity.

The above conclusion is reached on the further assumption that each car of goods received shall be computed on its own basis and as such the sorting would be included in the rate. If, however, the shipment consists of more than one car, each containing assortment but to be accumulated for storage in full lot unit quantities or more, the warehouseman would be entitled to extra reimbursement for the extra service involved.

Individual Package Delivery

I. P. D., although it is "less than Lot Unit" carried to its extreme and differs therefrom only in degree, requires somewhat different consideration. In L. L. U. a percentage is used that is assumed to represent the average waste of space due to aisles and honeycomb in the various sizes of lot. A lot of less than five packages is rare and the percentages are estimated on a much higher average; in I. P. D. the lot is one package. 331/2 per cent aisles are generally sufficient, but in the case of small packages a wider aisle may be required to admit a man or a truck. This also occurs in the case of irregular-sized packages such as case goods or dry goods, the aisle having to admit the maximum package.

Height of pile is also limited to a point lower than that indicated in L. L. U. owing to the increased instability of pile and excessive cost of delivery of packages in the lower tiers. Experience demonstrates that four packages high is an extreme limit; that two high is the height most often indicated; and that one high is much more frequent than anything over

Small Packages

Theoretically, small packages of a commodity can be stored at proportionate rates per cwt. to that of the larger packages of the same commodity, but this does not appear to work out under practical operating conditions. In many cases the instability of the pile when partial delivery of the lot takes place necessitates the removal of goods in the upper tiers to a lower level; fragility of package oftentimes will not permit of rehandling broken lots for the purpose of making space for other goods and the excessive cost of rehandling all tend towards excessive honeycomb of the house. The absence of statistics to indicate the extent of this loss makes it necessary to accept some arbitrary figure in the computation of the rate. Furthermore it seems advisable to fix a minimum charge on small packages regardless of weight. This increased charge may be avoided if the manufacturer will pack or strap small units into one larger unit for which he will receive a lower rating per 100 pounds than he would otherwise obtain.

FLOOR-LOAD CLASSIFICATION TABLE

	require	n cents pe ed to earn ft. per m	in cents			Class	Floor Load (lbs. per sq. ft.)	Lot Unit Weight
16.25	7.56	10.07	12.18	14.74	\$16.21			
1.17	1.41	1.88	2.27	2.75		.h—		
	1 . 55	2.07	2.50	3 . 02		.g-		
1.41	. 1 . 71	2.27	2.75	3 . 33	3.66	.f—		
1.55	1 . 88	2.50	3 . 02	3.66	4.03	.e-		
	2 . 07	2.75	3 . 33	4 . 03	4 . 43 :	.d—		
1.88	2 . 27	3.02	3 . 66	4 .43	4.87	.c-		
2.07	2 . 50	3 . 33	4 .03	4 .87	5 . 30	.b—		
2.27	2.75	4.03	4.43	5 90	6 48		238 .64 up .	30,000
2.30	2 22	4.43	5 26	6.48	7 13	B	216 .94	27,000
2.75	2 66	4 87	5.80	7 13	7 85	C	197,22	25,000
3.33	4 03	5 36	6 48	7.85	8.63	D	. 179 . 29	23.000
3.66	4 43	5.89	7 13	8 63	9.49	E.	. 162 .99	20,000
4 03	4 87	6.48	7.85	9.49	10.4	.F	. 148.17	19,000
4 43	5.36	7.13.	6.63	10.4		.G	134.70	17,000
4.87	. 5.89	7.85	. 9.49	11.5	12.6	.H	122.46	15.000
5 36	6.48	8.63	10.4	12.6	13.9	.J	111 . 33	14,000
5.89	7 . 13	9 . 49	11 . 5	13.9	15.3	.K	101 .21 92 .00	13,000
6.48	7.85	10.4	12.6	15.3	.16.8	.L	92.00	12,000
7.13	8 . 63	11.5	13 . 9	. 16.8	.18.5	. M	83.64	11,000
7.85	9.49	12.6	15 . 3	18 . 5	20 . 4	.N	. 76.04	10,000
8.63	10.4	13.9	16 . 8	20 . 4	22 . 4	.0	69.12	9,000
9.49	.11.5	15.3	. 18.5	.22.4	. 24 .6	.P	62.84	8,000
10.4	12 . 6	18.5	20 . 4	24 .6	29.8	.Q	57.13	6,500
11.5	13.9	20.4	24 6	20.0	22 8	·	47.21	
12.6	15.3	20.4	24 . 0	29.8	34.0	T	42 02	5 500
15.9	19.5	24 6	20 8	36 1	30 7		42.92 39.02 35.47	5,000
16.8	20.4	27 1	32.8	39 7	43.6	v	35 47	4.500
18 5	22 4	29.8	36.1	43.6	48.0	W	. 32.25	4,000
20.4	24.6	32.8.	39.7	.48.0	. 52 .8	.X	. 29.32	3,500
22 4	.27.1	. 36.1	.43.6.	.52.8	58.1	Y	. 26.65	3,500
24.6	.29.8	39.7	48.0	. 58.1	. 63 .9	.Z	. 24.23	3,000
27.1	32.8	43.6	.52.8	.63.9	.70.3	.Aa	. 22.03	2,800
29.8	.36.1	48.0	58 . 1	70.3	77 . 3	.Bb	. 20.02	2,500
32.8	.39.7	52 . 8	. 63 . 9	.77.3	.85.0	.Cc	. 18.20	2,300
36.1	.43.6	58 . 1	70.3	.85.0	.93.5	. Dd	. 16.55	2,100
39.7	.48.0	63 . 9	77.3	.93.5	.103	.Ee	. 15.04	1,900
43.6	.52.8	70.3	85.0	. 103	.113	.Ff	. 13.68	1,700
48.0	.58.1	77 . 3	93 . 5	. 113	.124	.Gg	. 12.43	1,600
52.8	.63.9	85 . 0	103	. 124	. 137	. Hh	. 11.30	1,400

^{*} These rates presuppose an occupancy of 50 per cent of available space, therefore the earnings per available square foot of space would be one-half of the amounts given.

Note.-The letter "I" has been purposely omitted in the classification. The Lot Unit quantity applies to the base classification of commodities. Minus classes (a—, b—, c—, etc.) to be used for storage below Standard such as open or yard storage.

HOW TO APPLY FLOOR-LOAD CLASSIFICATION TABLE

1st. When the commodity is in a case, paper container, barrel or other cooperage, compute the cubic content of the package in feet and add 5 per cent for loss in pile. For all other types of packages compute the cubic content from pile measurement. If it is not possible to obtain pile measurement, then package measurement may be used, in which event there should be added 10 per cent for loss of space in pile.

Note.—The square of the greatest diameter governs in the

measurement of cylindrical packages.

2d. Divide weight of package by cubic feet of package in pile, thus obtaining weight per cubic foot of package in pile.

3d. Multiply the weight per cubic foot of package in pile by the height to which commodity can practically be piled (not to exceed 81/3 feet), thus obtaining the floor load.

4th. The floor load applied to the table indicates the classification to which the Standard Modifications, if any, are applied.

5th. Apply resultant classification to package rate table.

[†] Arranged to conform to "Standard Warehouse" as of 1916.

[‡] Arranged to conform to "Standard Warehouse" as of 1920.

EXAMPLES ILLUSTRATING METHODS OF APPLYING SYSTEM FOR CLASSIFYING COMMODITIES FOR STORAGE

The following examples are taken from actual instances of goods offered for storage where actual measurements were

Example No. 1

A lot consisting of 1920 boxes of prunes measuring 1.3 feet × .81 foot × .51 foot and having a gross weight of 28.5 pounds each. Method:

 $1.3 \times .81 \times .51 = .537$ (cubic foot package).

.537 + .0268 (5% loss in pile) = .564 (cubic foot package in pile).

28.5 divided by .564 = 50.53 pounds (weight per cubic foot package in pile)

 50.53×8.16 (16 high $\times .51$) = 412.32 pounds (floor load). 412.32 pounds applied to table = Base class A, to which should be added modifications if any.

Note.-In order to maintain a standard floor load of 250 pounds per square foot, these goods can be piled to a height of only 4.95 feet.

250 pounds divided by 50.53 = 4.95 feet (height of standard pile).

Example No. 2

Storage rates are desired on a lot of roofing paper in rolls 3 feet high × .53 foot in diameter and weighing 35 pounds.

Note.—Owing to instability and to the length of the vertical dimension, this commodity cannot be piled higher than 2 on end and the practical pile height is, therefore, 6 feet.

 $.53 \times .53 \times 3 = .843$ (cubic foot package).

.843 + .042 (5% loss in pile) = .885 (cubic foot package in pile).

35 divided by .885 = 39.55 pounds (weight per cubic foot package in pile).

 $39.55 \times 6 = 237.30$ pounds (floor load).

237.30 pounds applied to table = Base class B, to which should be added modifications if any.

Example No. 3

240 bags of walnuts, each 3.10 feet \times 1.60 feet \times 1.04 feet and weighing 108 pounds, are stored in a space 10.5 feet long \times 15.3 feet wide \times 8.3 feet high. Method:

 $10.5 \times 15.3 \times 8.3 = 1333.395$ cubic feet of pile space.

1333.395 divided by 240 = 5.56 (cubic feet package in pile). 108 divided by 5.56 = 19.42 (weight per cubic foot package in pile).

 $19.42 \times 8.3 = 161.19$ pounds (floor load).

161.19 pounds applied to table = Base class F, to which should be added modifications if any.

STANDARD MODIFICATIONS WITH ILLUSTRATIONS

- 1. Excess Value.-Vanilla Beans, Silks, Pig Tin.
- 2. Fragility.-Either of package or contents.
- 3. Especial susceptibility to damage or claims.—Fine Tobaccos. Delicate Fabrics.
 - 4. Liability to cause damage.-Molasses, Dye Stuffs.
- 5. Excess care, attributable to leakage.—All Liquids.
- 6. Excess care, attributable to temperature.-Fruits and Vegetables.
 - 7. Isolation.—Tea.
 - 8. Attractive to vermin.—Peanuts in shell.
 - 9. Hazardous.-Vegetable Fibre, Varnishes.
 - 10. Malodorous.-Grease Wools.
 - Dusty.—Cement, Alkali.
 Mussy.—Dates, Glucose.
- 13. Requiring access for examination or treatment.—Olives or Cherries in casks.

When information is disseminated from a central bureau, a numerical list of modifications and information will be found a convenient method of notifying the warehouseman of the nature of the commodity although it may not require any modification of the storage charge if stored in warehouses where such goods are handled in quantity.

TABLE SHOWING PERCENTAGES OF INCREASE AND DECREASE FROM STANDARD

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
	crease
	66
" $e-=37.9\%$ " $Q=317.7\%$ " $R=359.5\%$	44
" $d-=31.7\%$ " " $R=359.5\%$	66
	66
" L 17 407 " " T 456 007	44
0-=17.4%	44
" $a-=9.1\%$ " $U=511.6\%$	44
" $A = STANDARD$ " $V = 572.7\%$	66
" B = 10. % increase " W = 640.0%	66
" $C = 21.\%$ " " $X = 714.0\%$	66
" $D = 33.1\%$ " $Y = 795.4\%$	44
" $E = 46.4\%$ " $Z = 885.0\%$	66
" $F = 61.1\%$ " $Aa = 983.5\%$	66
" $G = 77.2\%$ " $Bb = 1092.\%$	44
" $H = 94.9\%$ " " $Cc = 1211.\%$	66
" $J = 114.4\%$ " $Dd = 1342.\%$	66
" $K = 135.8\%$ " $Ee = 1486.\%$	"
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	66
" $M = 185.3\%$ " $Gg = 1819.\%$	66

A SHORTER METHOD OF CLASSIFICATION

The following table is arranged for classifying commodities in cases, paper containers and barrels or other cooperage. Cognizance of a 5 per cent loss in pile has been taken in calculating the table.

How to Apply the Table

1. Compute the weight per cubic foot of the package and apply to the table.

2. Determine the height to which the commodity can be practically piled and select the corresponding pile height column of the table. If the acquired pile height falls between columns, take the column showing the lower pile height figure.

3. The intersection of the line acquired under (1) with the column acquired under (2) indicates the base class.

Example

St

h t T

n

A lot of roofing paper in rolls 3 feet high by .53 foot in diameter and weighing 35 pounds is offered for storage.

 $.53 \times .53 \times 3 = .843$ (cubic foot package).

35 divided by .843 = 41.52 pounds (weight per cubic foot of package).

41.52 applied to table falls in the 5th line.

Note.-Owing to instability and the length of the vertical dimension, this commodity can be tiered 2 high on end, making the practical pile height 6 feet.

Applying the acquired pile height to the table, it is found to fall between columns 4 and 5 and the pile height column

to use is, therefore, number 5.
The intersection of line 5 and column 5 indicates that the Base class = B

to which should be added modifications if any.

Note.—This table may be used for commodities in containers other than those specified by following the method outlined and modifying the resultant base class one class to take care of the greater loss of space in pile, but this method is not so accurate as the floor-load method hereinbefore de-

SHORTER METHOD CLASSIFICATION TABLE

Pounds per cu. ft.				T	BLES			
Pkg. measurement	1	2	3	4	5	6	7	8
58.60 or over	· A	A	A	A	A	A	A	A
53.27 to 58.59	A	A	A	A	A	A	A	В
48.43 " 53.26	A	A	A	A	A	A	В	C
44.03 " 48.42"	A	A	A	A	A	B	C	D
40.03 " 44.02	A	A	A	A	В	C	Ď	E
40.00 11.02	A	A	A	B	C	D	E	F
00.00 10.02	A	A	B	C	Ď	E	F	G
		B	C .	D	E	F	G	H
30.01 00.01	A	C		E	F	G	H	J
27.34 " 30.06	В		D					K
24.85 " 27.33	C	D	E	F	G	H	J	
22.60 " 24.84	D	\mathbf{E}	F	G	H	J	K	L
20.54 " 22.59	\mathbf{E}	\mathbf{F}	G	H	J	K	L	M
18.67 " 20.53	\mathbf{F}	G	H	J	\mathbf{K}	L	M	N
16.98 " 18.66	\mathbf{G}	\mathbf{H}	J	\mathbf{K}	L	\mathbf{M}	N	O
15.43 " 16.97	\mathbf{H}	J.	K	L	\mathbf{M}	N	O	P
14.03 " 15.42	J	\mathbf{K}	L	\mathbf{M}	N	O	P	Q
12.76 " 14.02	\mathbf{K}	L	\mathbf{M}	N	O	P	Q	R
11.60 " 12.75	\mathbf{L}	\mathbf{M}	N	O	P	Q	R	\mathbf{S}
10.54 " 11.59	\mathbf{M}	N	O	P	Q	\mathbf{R}	S	T
9.59 " 10.53	N	0	P	Q	Ř	S	T	\mathbf{U}
8.71 " 9.58	O	P	Q	Ř	S	T	U	\mathbf{v}
7.92 " 8.70	P	Q	Ř	S	$\tilde{\mathbf{T}}$	Ū	v	W
7.20 " 7.91	Q	R	S	$\widetilde{\mathbf{T}}$	Ū	V	W	X
6.55 " 7.19	Ř	S	T	Û	v	w	X	Ŷ
5.95 " 6.54		$\widetilde{\mathbf{T}}$	Ū	v	W	X	Y	\mathbf{Z}
5.41 " 5.94	ST	Û	v	w	X	Y	$\hat{\mathbf{z}}$	Aa
4.92 " 5.40	Û	v	w	X	Ÿ	$\hat{\mathbf{z}}$	Aa	Bb
4.47 " 4.91	v	w	x	Y	\dot{z}	Aa	Bb	Cc
4.47 4.91	w	X	Y	\dot{z}	Aa	Bb	Ce	Dd
	X	Y	\dot{z}	Aa	Bb	Cc	Dd	Ee
	Ŷ	Ž	Aa	Bb	Cc	Dd	Ee	Ff
0.00 0.00					Dd	Ee	Ff	
0.00 0.00	\mathbf{Z}	Aa	Bb	Cc				Gg
2.10 0.00	Aa	Bb	Ce	Dd	Ee	Ff	Gg	Hh
Ht. of pile in ft.	8.333	7.576	6.887	6.261	5.692	5.174	4.704	4.276

RATE MAKING BY INDEX

Floor-Load and Cubic Systems

Herewith is offered a set of 20 triple column tables for acquiring package rates under the Index, Floor-Load and Cubic Systems with 12 additional tables for the Floor-Load System only. As stated in the introduction to this Report, it is necessary first to "set" the tables to produce the desired earning per square foot. By way of illustration the tables are "set" to show six different earnings per square foot, viz.: 16.21, 14.74, 12.18, 10.07, 7.56, 6.25 cents, and may be set to acquire other earnings merely by placing class A at the head of the proper table. The other class letters follow (if "plus") or precede (if "minus") in sequence.

At the head of the first column (of the three column tables) is indicated the earning per square foot, at the head of the second column the rate per 100 pounds, and at the head of the third column the rate per cubic foot; therefore the warehouseman, having determined upon his earning basis, selects the table indicating that basis at the head of its first column. This table becomes class A, the next table class B and so on. Directions for acquiring package rates under all three systems with illustrative examples follow.

INDEX SYSTEM

Definition: Index is the number of square feet of floor space occupied by a package in pile when stored to the maximum practical pile height (not exceeding 81/3 feet), weight not considered.

Method of Computing Index: When the package is a case,

paper container, barrel or other cooperage, the Index should be computed from package measurement with an allowance of 5% for loss of space in pile. For all other types of packages the Index should be acquired from pile measurement. If it is not possible to obtain pile measurement, then package measurement may be used, in which event there should be added 10% for loss of space in pile.

Index from Package Measurement: Find the number of square feet in the horizontal face of the package, i.e., the face that is to rest upon the floor. Add a percentage as herein-before instructed to provide for loss of space in pile. Divide by the number of packages high that the commodity can be tiered practicably. The result is the Index. (Note.-The square of the greatest diameter governs in the measurment of cylindrical packages.)

Formula:

Floor surface of package + % loss = Index. No. of pkgs. in maximum practical pile

Illustrations: A case 2 feet \times 2 feet \times 2½ feet. Floor surface $2 \times 2.5 = 5$ square feet + .25 (5% loss in pile) = 5.25square feet divided by 4 (number of packages high in practical pile) = 1.31 (Index).

A barrel 2.85 feet long by 2.08 feet in diameter. If piled on end, we have $2.08 \times 2.08 = 4.3264$ square feet + .21632 (5% loss in pile) = 4.54272 square feet divided by 2 (number of packages high in practical pile) = 2.27 (Index). If piled on bilge, $2.85 \times 2.08 = 5.928$ square feet + .2964 (5% loss in pile) = 6.2244 square feet divided by 4 (number of packages high in practical pile) = 1.56 (Index).

Index from Pile Measurement: Ascertain the number of square feet of floor surface occupied and divide by the number of packages in the pile. The resultant figure (square feet package in pile) is the Index providing that the goods are stacked to the maximum practical pile height. Where the actual pile height is above or below the practical limit, then, having acquired the number of square feet per package in pile, multiply by the actual pile height and divide the result by the maximum practical pile to acquire the Index. An alternative method, where there is even piling, is to multiply the square feet per package in pile by the actual number of tiers high and divide the result by the maximum practical number of tiers high.

Formula:

 $\frac{\text{Square feet pile}}{\text{No. of packages}} \times \frac{\text{Actual pile height}}{\text{Maximum practical pile height}}$ = Index.

Illustrations: 234 bags of cocoa beans are stored in a space 25.5 feet long × 6.0 feet wide × 8.0 feet high. 25.5 feet \times 6.0 feet = 153 square feet divided by 234 = .65 (Index). 20 bags of walnuts are stored in a space 5.35 feet long X

4.35 feet wide \times 5.05 feet high. (a) $5.35 \times 4.35 = 23.2725$ square feet divided by 20 =1.1636 (square feet package in pile). 1.1636 \times 5 (actual number tiers high) = 5.818 divided by 8 (practical number tiers high) = .73 (Index).

(b) 1.1636×5.05 (actual pile height) = 5.87618 divided by

8.10 (practical pile height) = .73 (Index).

In acquiring the Index we have not heretofore considered the weight of the package. It will be seen, therefore, that Index applies primarily to a "low density" commodity, i. e., one that, when piled to its maximum practical pile height, will produce a floor load (weight per square foot of floor space) of less than 250 pounds. If the actual weight of the package is such as to produce a floor load of 250 pounds or more, then we have what is termed a "high density" commodity and the rate is a simple matter of x cents per 100 pounds. The dividing line between the two types, "low density" and "high density," is indicated by a "balancing weight," so to speak, usually termed the "limiting weight." It is found by multiplying the Index by 250.

Formula: Index \times 250 = Limiting weight.

Illustration: In a previous example we found the Index of a lot of cocoa beans to be .65, which when multiplied by 250 produces a weight limit of 162.5 pounds. This means that if the actual weight of the package is less than 162.5 pounds we have a "low density" commodity, while if the actual weight exceeds 162.5 pounds then we have a "high density" commodity. If the commodity is of "low density," then the Index times the desired earning per square foot produces the package rate. If of "high density," the actual weight of the package times the desired rate per 100 pounds produces the

package rate.

How to Use the Tables: Compute the Index as hereinbefore directed and apply it to the first column of the table indicating the desired rate per square foot. When the Index falls between figures, take the larger. Note the corresponding weight limit figure in the second column. If the actual weight of the package does not exceed the indicated "weight limit," then on the same line in the central column of the page will be found the package rate. If the actual weight of the pack-

age exceeds the indicated "weight limit," then apply the actual weight of the package to the "weight limit" column of the table. If the weight falls between figures, select the larger. On the same line in the central column of the page will be found the package rate.

Illustration: Cocoa beans, Index .65, weight of package 145 pounds, to earn 16.21 cents per square foot. Applying the Index to the first column of class A (16.21 basis), it is found to fall between .617 and .771 and having taken the larger figure we find the weight limit to be 192.8 pounds. As the actual weight of the package was 145 pounds, the package rate is, therefore, 12½ cents. Had the actual weight been 200 pounds, we would acquire a package rate of 15 cents.

FLOOR-LOAD SYSTEM

All commodities are classified in accordance with the Floorload table as hereinbefore explained. It is only necessary to apply the weight of the package to the "weight limit" column of the proper class applicable to the desired earning per square foot.

Illustration: 234 bags of cocoa beans at 145 pounds each are stored in a space 25.5 feet long \times 6 feet wide \times 8 feet

high, to earn 16.21 cents per square foot.

 $25.5 \times 6.0 \times 8.0 = 1224$ cubic feet of pile space. 1224 divided by 234 = 5.23 cubic feet package in pile.

145 divided by 5.23 = 27.725 pounds per cubic foot package in pile.

 27.725×8 (practical pile height) = 221.8 Floor load. 221.8 Floor load = class B.

Applying the weight of the package at 145 pounds to the

"weight limit" column of class B (16.21 basis), we acquire a rate of 12½ cents per package. (Compare with the same example under Index and Cubic Systems.)

CUBIC SYSTEM

In this system the course of procedure does not materially differ from the Index System. If the package is a case, paper container, barrel or other cooperage, compute the cubic content of the package and add 5 per cent for loss in pile. For all other types of package compute the cubic feet per package in pile from pile measurement. If it is not possible to obtain pile measurement, then package measurement may be used, in which event there should be added 10 per cent for loss of

(Continued on page 44)

				FOR	INDE				D AN			SYSTE	EMS				
(14. (12. (10. (7. (6.	21 besi 74 besi 18 besi 07 besi 56 besi 25 besi	1) 0- 1) 1- 1) 1- 1) 1- 1) 1- 1) 1-	(14.1	11 basis 14 basis 18 basis 17 basis 16 basis 15 basis	m- k- h-			Cla				(14.	21 basis 74 basis 18 basis 07 basis 56 basis 25 basis	S i	(14 (12 (10 (7	07 basi	s) k- s) h- s) f-
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						L U.	1/3	1/10 L.U.	L U.	10.	1/90 L. U.						
117 176 234 293 351	29.3 43.9 58.6 73.2 87.8	.976 1.46 1.95 2.44 2.93	.106 .160 .213 .266 .319	26.6 39.9 53.2 66.6 79.9	.887 1.33 1.77 2.22 2.66	1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11/2	134 2 234 234 234	11/g 21/g 21/g 21/g 3	.097 .145 194 242 .290	24 2 36.3 48.4 60.5 72.6	.807 1.21 1 61 2.02 2.42	.088 132 176 220 264	22.0 33.0 44.0 55.0 66.0	
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1 64 1 87 2 11 2 34 2 93	409.9 468.5 527.1 585.6 732.0	13.7 15.6 17.6 19.5 24.4	1.49 1.70 1.92 2.13 2.66	372.7 425.9 479.2 532.4 665.5	12.4 14.2 16.0 17.7 22.2	7 8 9 10 1234	9 10 12 1234 16	11 12 14 15 19	7 8 9 10 12}4	10 12 12/2	11 12 14 15 19	1.36 1.55 1.74 1.94 2.42	338.8 387.2 435.6 484.0 605.0	11.3 12.9 14.5 16.1 20.2	1 23 1 41 1 58 1 76 2 20	308.0 352.0 396.0 440.0 550.0	10.3 11.3 13.3 14.3 18.3
3 51 4 10 6 69 5 86 7 03	878 S 1025 1171 1464 1767	29 3 34.2 39.0 48.8 58.6	3.19 3.73 4.26 5.32 6.39	798.6 931.7 1065. 1331. 1597.	26.6 31.1 35.5 44.4 53.2	15 171/2 20 25 30	19 22 25 32 38	23 27 30 38 45	15 173/2 20 25 30	19 22 25 33 38	23 27 39 38 45	2.90 3.39 3.87 4.84 5.81	726.0 847.0 968.0 1210 1452.	24.2 28.2 32.3 40.3 48.4	2.64 3.08 3.52 4.40 5.28	660 0 770 0 880 0 1100 1320	22.0 25.7 29.3 36.7 44.0
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16.4 18.7 21.1 23.4 25.8	4099. 4685. 5271. 5856 6442.	137. 156. 176. 196. 215.	14.9 17.0 19.2 21.3 23.4	3727 4259 4792 5324 5856	124 142 160 177 195	70 80 90 100 110	88 100 113 125 138	105 120 135 150 165	70 80 90 100 110	88 100 113 125 138	196 129 136 159 165	13.6 15.5 17.4 19.4 21.3	3388 3872 4356 4840 5324	113 129 145 161 177	12 3 14 1 15 8 17 6 19 4	3080 3520 3960 4400 4840	103 117 - 132 147 161
28 1 30 5 32 8 35 1 37 5	7028 7613 8199 8785 9370	234. 254. 273. 293. 312	25.6 27.7 29.8 31.9 34.1	6389 6921 7454 7986 8518	213 231. 248. 266. 284	120 130 140 150 160	150 163 175 188 200	180 195 210 225 240	120 130 140 150 100	150 163 175 188 200	180 195 210 225 240	23 2 25 2 27 1 29 0 31 0	5808 6292 6776 7260 7744	194 . 210 226 242 258	21 .1 22 9 24 6 26 4 28 2 29 9	5290 5720 6160 6600 7040	176 191 206 220 235 249
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						L. U.	1/3 L.U.	1/10 L'U.	L. U.	1.3 L. U.	2/0.					-	
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280 320 360 400 480	70 80 90 100 120	2.33 2.67 3.00 3.33 4.00	255 291 327 364 436	63.6 72.7 81.8 90.9 109.1	2.12 2.42 2.73 3.03 3.64	2 1 1 1 2 1 1 2 1 1 2 1 2 1 2 1 2 1 2 1	214 214 3 314 4	3 3 3½ 4 4½	2)4 2)4 3 3 3)4	3 3 4 4 4 4)5	436	231 264 298 331 397	57.9 66.1 74.4 82.6 99.2	1.93 2.20 2.48 2.75 3.31	210 240 270 301 361	52.6 60.1 67.6 75.1 90.2	1.75 2.00 2.25 2.50 3.01
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1.12 1.28 1.44 1.60 2.00	280 320 360 400 500	9 33 10.7 12.0 13.3 16.7	1.02 1.16 1.31 1.45 1.82	254.5 290.9 327.3 363.6 454.5	8.48 9.70 10.9 12.1 15.2	7 8 9 10 1236	9 10 12 12)4 16	11 12 14 15 19	7 8 9 10 131/2	10 13 13/6	11 12 14 15 19	926 1.06 1.19 1.32 1.65	231.4 264.5 297.5 330.6 413.2	7.71 8.82 9.92 11.0 13.8	841 962 1.08 1.20 1.50	210 4 240 4 270 5 300 5 375 7	7 01 8 01 9 02 10 0
2.40 2.80 3.20 4.00 4.80	600 700 800 1000 1200	20 0 23 3 26 7 33 3 40 0	2.18 2.55 2.91 3.64 4.36	545.5 636.4 727.3 909.1 1091	18.2 21.2 24.2 30.3 36.4	15 171/2 20 25 30	19 22 25 32 38	23 27 30 33 45	15 171/5 20 25 30	19 22 25 32 38	23 27 30 38 45	1 98 2 31 2 64 3 31 3 97	495.9 578.5 661.2 826.4 991.7	16.5 19.3 22.0 27.5 33.1	1.80 2.10 2.40 3.01 3.61	450.8 525.9 601.1 751.3 901.6	15.0 17.5 20.0 25.0 30.1
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				1	Pile H	leight	Mod	lificat	ions f	or Cu	bic S	ystem					
	PILE NEIGHT 7.96 or over 7.24 to 7.95 6.58 " 7.23 5.98 " 6.57 5.44 " 5.97				1 Cla 2 Cla 3	es isses			4.50 to 4.09 " 3.72 " 3.38 " 3.07 " 2.79 "	4.93 4.49 4.08 3.71 3.37		6 Cla 7 8 9 10	ses				

Explanation of table shown above and on opposite page is begun on page 41. Does this table look complex?

It isn't if you "know your business!" By knowing your

(14.7 (12.1 (10.0 7.5	11 basis 74 basis 18 basis 97 basis 66 basis 55 basis) e-) c-) a-	(14.1 (12.1 (10.0	21 basis 74 basis 18 basis 97 basis 56 basis 25 basis	d- b- AD			Cla	isaes			(14.: (12.: (10.:	21 basis 74 basis 18 basis 07 basis 56 basis 25 basis	o c- o a- o B	(14.1 (12.1 (10.6 (7.1	71 basis 74 basis 18 basis 97 basis 56 basis 25 basis) A) C
9.15 Index	WL.	1.10 Cubic	10.07 Index	Wt.	1.21 Cubic	Cts. per		Cts. per			res.ft.	11.07 Index	Wt.	1.33 Cubic	12.18 Index	Wt.	1.46 Cubic
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765 874 984 1 09 1 37	191 2 218 6 245 9 273 2 341 5	6 37 7 29 8 20 9 11 11 4	695 795 894 993 1 24	173 9 198 7 223.5 248.4 310 5	6 62 7 45 8 28 10 3	8 9 10 121/2	10 12 1234 16	12 14 15 19	8 9 10 123/2	10 13 123/2 16	11 12 14 15 19	723 813 903 1 13 1 35	180.6 203.2 225.8 282.2 338.7	6.02 6.77 7 53 9 41	657 739 821 1 03	164 2 184 7 205 3 256 6	5 47 6 16 6 84 8 55
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4 37 4 92 5 46 6 56 7 65	1093 1229 1366 1639	36 4 41 0 45 5 54 6	3.48 3.97 4.47 4.97 5.96 6.95	993 5 1118 1242 1490 1739	33.1 37.3 41.4 49.7	40 45 50 60	50 57 63 75	60 68 75 90	48 45 50 00	58 57 63 75	65 75 99	3 61 4 06 4 52 5 42 6 32	1016 1129 1355 1581	30.1 33.9 37.6 45.2 52.7	3 69 4 11 4 93 5 75	821 1 923 7 1026 1232 1437	27 4 30 8 34 2 41.1
8.74 9 84 10 9 12 0	2186 2459 2732 3005 3278	72.9 82 0 91 1 100	7 95 8 94 9 93 10 9	1987 2235 2484 2732	66.2 74.5 82.8 91.1	80 90 100 110	100 113 125 138	120 135 150 165	90 100 110	100 113 125 138	135 150 165	7 23 8 13 9 03 9 93 10 8	1806 2032 2258 2484 2709	60.2 67.7 75.3 82.8 90.3	6.57 7.39 8.21 9.03 9.85	1642 1847 2053 2258 2463	54.7 61 6 68 4 75 3
14 2 15 3 16 4 17 5 18.6	3552 3825 4098 4371	118 127 137 146	14 9 15.9	2980 3229 3477 3726 3974 4222	108 116 124 132	130 140 150 160	163 175 188 200 213	195 210 225 240	130 140 150 160	163 175 188 200 213	195 210 225 240 255 270	11 7 12.6 13 5 14 5	2935 3161 3387 3613 3838	97 8 105 113 120	10 7 11 5 12 3 13 1	2668. 2874. 3079 3284 3489	88 9 96 8 103 109
19 7 20 8 21 9	4918 5191 5464	164 173 182	16 9 17 9 18 9 19 9	4471 4719 4967	149 157 166	180 190 200	225 238 250	270 285 300	180 190 200	225 238 250	270 285 300	15 4 16 3 17 2 18 1	4064 4290 4516	135. 143 151	14 8 15 6 16.4	3695 3900 4105	123 130 137
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			7.96 or 7.24 to 6.58 " 5.98 " 5.44 "	over 7.95 7.23 8.57 5.97		1 Cl 2 Cl 3				4.50 to 4.09 1 3.72 3.38 3.07 2.79	4.49 4.06 3.71 3.37		6 CI	lasses			

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-	Wt.	-	-	Wt.	-		Storag			Handlin	4		Lim.			Lim.	
						L U.	L'0.	1/10 L.U.	L. U.	L'0.	1/10 L. U.		-				
037 .056 075 093 112	9.3 14.0 18.7 23.3 28.0	311 467 622 778 933	.034 .051 .068 .065 .102	8.5 12.7 17.0 21.2 25.4	283 424 .565 707 .848	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	114	1 11/4 11/2 2 23/4	13/2	2 2 2 2 2 2 2 2 2	11/2 21/4 21/4 3	031 046 .062 077 093	7.7 11.6 15.4 19.3 23.1	257 386 514 643 771	.028 042 056 070 .084	7.0 10.5 14.0 17.5 21.0	.36 46 50
131 149 168 187 224	32.7 37.3 42.0 46.7 56.0	1.09 1.24 1.40 1.56 1.87	119 .136 .153 .170 204	29.7 33.9 38.2 42.4 50.9	990 1.13 1.27 1.41 1.70	234 234 232 3	21/4 21/2 3 31/2 4	3 3 3 1/4	23/2 23/2 3 3 33/2	3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	134	108 123 .139 154 185	27 0 30.8 34.7 38 6 46 3	900 1 03 1 16 1 29 1 54	.098 112 126 140 .168	24.5 28 0 31.5 35.0 42.1	1.0 1.1 1.4
.261 299 336 373 448	65.3 74.6 84.0 93.3 112.0	2.18 2.49 2.80 3.11 3.73	237 271 305 339 407	59.4 67.9 76.3 84.8 101.8	1.98 2.26 2.54 2.83 3.39	3½ 4 4½ 5	4½ 5 6 7 8	6 6 7 8 9	4 434 5 5	6 7 7 8	8 8	216 247 278 306 370	54.0 61.7 69.4 77.1 92.5	1 80 2.06 2.31 2.57 3.08	.196 224 252 280 .336	49.1 56.1 63.1 70.1 84.1	1.6 1.8 2.1 2.3 2.8
522 597 672 746 933	130.6 149.3 167.9 186.6 233.3	4.35 4.98 5.60 6.22 7.78	475 543 611 679 848	118.7 135.7 152.7 169.6 212.0	3.96 4.52 5.09 5.65 7.07	7 8 9 10 121/2	9 10 12 1234 16	11 12 14 15 19	7 8 9 10 1236	10 12 12/4	11 12 14 15 19	432 493 555 617 771	108.0 123.4 138.8 154.2 192.8	3.60 4.11 4 63 5.14 6 43	393 449 506 .561 701	98.1 112.2 126.2 140.2 175.2	3.7
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2.61 2 99 3 36 3.73 4 48	653 1 746 4 839 7 933 0 1120	21 8 24 9 28 0 31 1 37 3	2.37 2.71 3.06 3.39 4.07	593.7 678.6 763.4 848.2 1018	19.8 22.6 25.4 28.3 33.9	35 40 45 50 60	44 50 57 63 75	53 60 68 75 90	35 40 45 50 60	44 50 57 63 75	53 69 68 75 90	2 16 2 47 2 78 3 08 3 70	539.8 616.9 694.0 771.1 925.3	18.0 20.6 23.1 25.7 30.8	1.96 2.24 2.52 2.80 3.36	490 7 560 8 630 9 701 0 841 2	16 18. 21. 23. 28.
5.22 5.97 6.72 7.46 8.21	1306 1493 1679 1866. 2053	43.5 49.8 56 0 62.2 68 4	4.75 5.43 6.11 6.79 7.46	1187 1357 1527 1696 1866	39.6 45.2 50.9 56.5 62.2	70 80 90 100 110	88 100 113 125 138	105 120 135 150 165	70 80 90 100 110	88 100 113 125 138	195 120 135 150 165	4.32 4.93 5.55 6.17 6.79	1080 1234 1388 1542 1696	36 0 41.1 46 3 51 4 56 5	3 93 4 49 5 06 5 61 6 17	981 4 1122. 1262 1402 1542.	32. 37. 42. 46. 51
8.96 9 70 10 5 11.2 11.9	2239 2426. 2612. 2799 2986	74 6 80 9 87 1 93 3 99 5	8 14 8.82 9 50 10.2 10 9	2036. 2206. 2375. 2545. 2714.	67 9 73.5 79.2 84.8 90 5	120 130 140 150 160	150 163 175 188 200	180 195 210 225 240	120 130 140 150 160	150 163 175 188 200	190 195 210 225 240	7 40 8 02 8 64 9 25 9 87	1851 2006 2159 2313 2467	61 7 66 8 72 0 77 1 82 2	6.73 7 29 7 85 8.41 8 97	1682 1823 1963 2103 2243	56. 60. 65. 70. 74
12 7 13 4 14 2 14.9	3172. 3359. 3545. 3732.	106 112 118 124	11.5 12.2 12.9 13.6	2884 3064 3223 3393	96 1 102. 107. 113.	170 180 190 200	213 225 238 250	255 270 285 300	170 188 190 200	213 225 238 250	255 279 285 300	10 5 11 1 11 7 12.3	2622 2776 2930 3084	87.4 92.5 97.7 103	9 53 10 1 10 7 11 2	2383 2554 2664 2804	79. 84. 88: 93.
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19.62 Index	7.85	2.35 Cubic	21.58 Index	8.63	2.50 Cubic	Clu. po			100 He.		reu. ft.	23.73 Index	9.49	2.85 Cubic	26.11 Index	16.4 Wt.	3.13 Cubic
Index	Wt.	Cubic	Index	Wt. Lim.	Cubin		Storage			Handlin		· ·	Wt.	Cuen		Lim.	-
						L.U.	L. U.	1/10 L. U.	L. U.	L. U.	1/10 L. U.						
025 038 061 064 076	6 4 9 6 12.7 15 9 19 1	212 319 425 531 637	.035	5.8 8 7 11 6 14.5 17.4	290 386	1/4 1/4 1/4	• 1 • 1 • 1 • 1 • 1 • 2	254	2	11/4 2 2 21/4 21/4	11/2 21/4 21/4 3	021 032 042 053 063	5.3 7 9 10 5 13 2 15 8	263 351 439	019 029 038 048 057	4.8 7.2 9.6 12.0 14.4	31 39 47
089 102 115 127 153	22.3 25.5 28.7 31.9 38.2		081 093 104 116 139	20.3 23.2 26.1 29.0 34.8	772 869 966 1 16	134 214 214 212 3	21/4 21/2 3 31/2 4	3 3 3 4 4	21/2 21/2 3 3 31/4	3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	414	074 084 096 105 126	18 4 21 1 23 7 26 3 31 6	614 702 790 878 1 05	067 077 086 096 115	16 8 19 2 21 5 23 9 28 7	55 63 71 79 96
178 204 229 255 306	44 6 51 0 57 4 63 7 76 5	1 49 1 70 1 91 2 12 2 55	209 232 278	40 6 46.3 52.1 57 9 69.5	1 54 1 74 1 93 2 32	31/2 4 41/2 5 6	4½ 5 6 7 8	6 6 7 8 9	41/2	5 6 7 7 8	8 8 8	147 169 190 211 253	36.9 42.1 47.4 52.7 63.2	1.40 1.58 1.76 2.11	134 153 172 192 230	33.5 38.3 43.1 47 57.5	1.4
357 408 459 510 637 765	89.2 102.0 114.7 127.5 159.3	2 97 3 40 3 82 4 25 5 31	417 463 .579	81.1 92.7 104.3 115.9 144.8	3 86 4 83	7 8 9 10 121/2	9 10 12 121/2	11 12 14 15 19	7 8 9 10 121/2	9 10 12 123/2	11 12 14 15 19	295 337 379 421 527	73 7 84 3 94 8 105 3 131 7	2 81 3 16 3 51 4 39	268 306 345 383 479	67 0 76 6 86 2 95 8 119 7	3.1: 3.9:
892 1 02 1 27 1 53 1 78	191 .2 223 .0 254 9 318 6 382 4 446 1	6.37 7.43 8 50 10 6 12.7	695 811 927 1.16 1.39	231.7 289 7 347.6	7.72 9 66 11.6	15 171/2 20 25 30	19 22 25 32 38	23 27 30 38 45	15 17½ 20 25 30	19 22 25 32 38	23 27 39 38 45	632 737 843 1.05 1.26	158 0 184 3 210 7 263 3 316 0	6.14 7 02 8 78 10 5	575 670 766 968 1 15	143 6 167 6 191 5 239 4 287 3	4.7 5.5 6.3 7.9 9.5
2.04 2.29 2.55 3.06 3.57	509 8 573.5 637 3 764 7 892 2	14 9 17 0 19 1 21 2 25 5	1 85 2 09 2 32 2 78	579.3 695.2	17.4 19.3 23.2	35 40 45 50 60	44 50 57 63 75	53 60 68 75 90	35 40 45 50	64 50 57 63 75	53 60 68 75 90	1.47 1.69 1.90 2.11 2.53	368 7 421 3 474 0 526 7 632 0	17 6 21.1	1 34 1 53 1 72 1 92 2 30	335 1 383 0 430 9 478 8 574 5 670 3	12 14 16 19
4 08 4 59 5 10 5 61 6 12	1020 1147 1275 1402	29.7 34.0 38.2 42.5 46.7 51.0	4.17 4.63 5.10	811.1 926.9 1043. 1159. 1275.	27.0 30.9 34.8 38.6 42.5 46.3	70 80 90 100 110	100 113 125 138	120 135 150 165	70 80 90 100 110	88 100 113 125 138	196 120 135 150 165	2.95 3.37 3.79 4.21 4.63 5.06	737 .3 842 .7 948 .0 1063 . 1159 .	24.6 28.1 31.6 35.1 38.6 42.1	2.68 3.06 3.45 3.83 4.21 4.60	766.1 861.8 967.6 1053.	25. 28. 31. 35.
6 63 7 14 7 65 8 16 8 67	1657 1784 1912 2039 2167	55 2 59 5 63 7 68 0 72 2	6.03 6.49 6.95 7.42	1506 1622 1738 1854	50.2 54.1 57.9 61.8	130 140 150 160	163 175 188 200	195 210 225 240	120 130 140 150 100	150 163 175 188 200	180 195 210 225 340	5 48 5 90 6 32 6 74 7 16	1369 1475 1580 1685	45.6 49.2 52.7 56.2 59.7	4.96 5.36 5.75 6.13	1245 1341 1436 1532 1628	41.5 44.5 47.5
9 18 9 69 10.2	2294	72.2 76.5 80.7 85.0	7 88 8.34 8.81 9.27	1970 2086 2201 2317	65.7 69.5 73.4 77.2	170 180 190 200	213 225 238 250	256 270 285 300	170 180 190 200	213 225 238 250	255 278 285 386	7.16 7.58 8.00 8.43	1791 1896. 2001. 2107.	63.2 66.7 70.2	6.89 7.28 7.66	1628 1724 1819 1915	54 : 57 : 60 : 63 :
				1	Pile H	leight	Mod	lificat	ions f	or Cu	abic S	ysten					
			PILE HI			ADVA	NCE			PILE H				ANCE			
			7.96 or 7.24 to 6.58 " 5.98 " 5.44 " 4.94 "	7.95 7.23 6.57		1 C 2 C 3	ass asses			4.09 3.72 3.38 3.07 2.79	4.49 4.08 3.71		7 8 9 10	44 44 44 44			

G H K M P R	HJLNOS	J K M O R T	K L N P S U	L M O Q	M N P R U			Class 16.21 ba 14.74 ba 12.18 ba 10.07 ba 7.56 ba 6.25 ba	esis esis esis esis			N O Q S V X	O P R T W Y	P Q S U X Z	Q R T V Y Aa	R S U W Z Bb	S T V X Aa Cc
11.5	12.6	13.9	15.3	16.8	18.5		Ca	nts per l	00 lbs.			29.3	22.4	24.6	27.1	29.6	32.8
							CEP		PACK	AGE							
						L. U.	10.	1/10 L. U.	L.U.	18.	1/10 L. U.						
4.4 6.5 8.7 10.9 13.1	9.9	3.6 5.4 7.2 9.0 10 8	3.3 4.9 6.5 8.2 9.8	3.0 4.5 5.9 7.4 8.9	2.7 4.1 5.4 6.8 8.1	154 1154 1154	1 1134 134 2	1 134 135 2 234	1 11/2 11/2 2	11/4 2 2 21/4 21/4	11/2 21/4 21/4 3	2.5 3.7 4.9 6.1 7.4	2 2 3 4 4 5 5 6 7	2 0 3 0 4 1 5 1 6 1	1 8 2 8 3 7 4 6 5 5	17 25 34 42 50	1 5 2 3 3 1 3 8 4 6
15.2 17.4 19.6 21.8 26.1	13.8 15.8 17.8	12.6 14.4 16.2 18.0 21.6	11 4 13.1 14.7 16 4 19 6	10 4 11 9 13.4 14.9 17 8	9.5 10.8 12.2 13.5 16.2	234 234 232 3	214 214 214 314 4	3 3 3!2 4 4!4	21/2 3 3 31/4	3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	415	8 6 9.8 11 1 12 3 14 7	7 8 8 9 10 1 11 2 13 4	7 1 8 1 9 1 10 2	6.5 7.4 8.3 9.2	5 9 6 7 7 6 8 4 10 1	5.3 6.1 6.9 7 6 9 2
30.5 34.8 39.2 43.5 52.2	27.7 31.7 35.6 39.6 47.5	25.2 28.8 32.4 36.0 43.2	32.7 39.2	20.8 23.8 26.8 29.7 35.7	18.9 21.6 24.3 27.0 32.4	33/2 4 43/2 5 6	41/2 5 6 7 8	6 6 7 8 9	41/2	5 6 7 7 8	8 8	17 2 19.7 22.1 24.6 29.5	15 6 17 9 20 1 22 3 26 8	14 .2 16 .2 18 .3 20 .3 24 .4	12.9 14.8 16.6 18.5 22.2	11 7 13 4 15 1 16 8 20 1	10 7 12 2 13 7 15 3 18 3
60 9 69.6 78.3 87.1 108 8	55.4 63.3 71.2 79.1 98.9	50.4 57.6 64.7 71.9 89.9	45.8 52.3 58.9 65.4 81.8	41.6 47.6 53.5 59.5 74.3	37.8 43.2 48.6 54.1 67.6	7 8 9 10 1234	9 10 12 121 ₂ 16	11 12 14 15 19	7 8 9 10 12/4	9 10 13 121/2	11 12 14 15 19	34.4 39.3 44.2 49.1 61.4	55 8	28 4 32 5 36 5 40 6 50 8	25 8 29 5 33 2 36 9 46 1	23 5 26 8 30 2 33 6 42 0	21 4 24 4 27.5 30 5 38.1
130.6 152.3 174.1 217.6 261.2	138.5 158.3 197.8 237.4	215.8	130.8 163.5 196.2	89.2 104.1 118.9 148.6 178.4	81.1 94.6 108.1 135.1 162.2	15 171/2 20 25 30	19 22 25 32 38	23 27 30 38 45	15 173/2 20 25 30	19 22 25 25 22 38	23 27 30 38 45	73.7 86.0 98.3 122.8 147.4	67.0 78.2 89.3 111.7 134.0	60.9 71.1 81.2 101.5 121.8	55.4 64.6 73.8 92.3 110.8	50.3 58 7 67 1 83 9 100 7	45 8 53.4 61.0 76.3 91 5
304.7 348.2 391.7 435.3 522.3	474.8	251.8 287.8 323.7 359.7 431.7	228.9 261.6 294.3 327.0 392.4	208.1 237.8 267.6 297.3 356.7	189.2 216.2 243.2 270.3 324.3	35 40 45 50 60	44 50 57 63 75	53 60 68 75 90	35 40 45 50	44 50 57 63 75	63 68 75 90	172.0 196.6 221.1 245.7 294.8	156.3 178.7 201.0 223.4 268.0	142.1 162.4 182.7 203.1 243.7	129.2 147.7 166.1 184.6 221.5	117.5 134.2 151.0 167.8 201.4	106 8 122.0 137.3 152.6 183 1
609.4 696.4 783.5 870.5 967.6	554.0 633.1 712.2 791.4 870.5	503 6 575 5 647 5 719 4 791 4	457 8 523 2 588 6 654 0 719 4	416.2 475.7 535.1 594.6 654.0	378.4 432.4 486.5 540.5 594.6	70 80 90 100 110	88 100 113 125 138	106 120 135 150 165	70 90 90 100 110	88 100 113 125 138	105 120 135 150 165	344.0 393.1 442.2 491.4 540.5	312.7 357.4 402.0 446.7 491.4	284 3 324 9 365 5 406 1 446 7	258.4 296.3 332.3 369.2 406.1	234.9 268.5 302.1 335.6 369.2	213 6 344 1 274 6 306 1 335 6
1045 1132 1219 1306 1393	949.7 1029. 1108. 1187 1266.	863.3 935.3 1007. 1079. 1151.	784.8 850.2 915.6 981.0 1046.	713.5 772.9 832.4 891.9 951.3	648.6 702.7 756.7 810.8 864.8	120 130 140 150 160	150 163 175 188 200	180 196 210 225 240	120 130 140 150 160	150 163 175 188 200	180 195 210 225 240	589.7 638.8 687.9 737.1 786.2		487.3 527.9 568.5 609.2 649.8	443.0 479.9 516.9 553.8 590.7	402 7 436 3 469 9 503 4 537 0	366 1 396 6 427 2 457 7 488 2
1480 . 1567 1654 . 1741 .	1345 1424 1504 1583	1223. 1296. 1367 1439.	1112. 1177. 1243. 1308.	1011 1070 1130 1189	918.9 972.9 1027. 1081	170 180 190 200	213 225 238 250	255 270 285 300	170 180 190 200	213 225 238 250	255 270 285 300	835.4 884.5 933.6 982.8	759 4 804 1 848 8 893 4	690.4 731.0 771.6 812.2	627.6 664.5 701.4 738.4	570 6 604 1 637 7 671 2	518 7 549 2 579 7 610 2

business—you can save money. Learn to use the table.

space in pile. Note the height to which the package may be

practically piled.

To Use the Tables: Select the class indicating the desired rate per square foot. This is the base table. If the package can be piled 7.96 feet or more, then apply the acquired cubic feet of package in pile to the third column of the table. If it falls between figures, select the larger. Note the "weight limit" in the second column on the same line. If the actual weight of the package does not exceed the "weight limit," then the package rate is found on the same line in the central column of the page. If the actual weight of the package exceeds the "weight limit," then apply the actual weight of the package to the "weight limit," tolumn of the table. If the weight falls between figures, take the larger. On the same line in the central column of the page will be found the package rate.

Pile Height Modification: If the package can be practically piled less than 7.96 feet, then, in accordance with the instructions at the bottom of each page, advance from the Base class the requisite number of classes. Apply to the resultant class the cubic feet of package in pile as before. Apply also the actual weight of the package to the "weight limit" column of

the Base class. The higher rate applies. Illustrations: 234 bags of cocoa beans at 145 pounds are stored in a space 25.5 feet long \times 6.0 feet wide \times 8.0 feet high,

to earn 16.21 cents per square foot.

 $25.5\times6.0\times8=1224$ cubic feet divided by 234=5.23 cubic feet package in pile. Applying 5.23 cubic feet to the third column of class A (16.21 basis), we acquire a package rate of 12½ cents, as the actual weight of the package at 145 pounds is less than the "weight limit" of 192.8 pounds. Had the actual weight been 200 pounds, we would acquire a package rate of 15 cents. (Compare with illustrative example under "Index System.")

A barrel 2.85 feet long \times 2.08 feet in diameter weighing 500 pounds, to earn 16.21 cents per square foot to be stored

on end.

 $2.08 \times 2.08 \times 2.85 = 12.33$ cubic feet + .6165 (5% loss in pile) = 12.95 cubic feet package in pile. Pile height = $2 \times 2.85 = 5.7$ feet requiring a modification of 4 classes.

Modifying class A (16.21 basis), 4 classes, we find the modified class to be class E (16.21 basis). Applying 12.95 cubic feet to the third column of class E (16.21 basis), we acquire a package rate of 40 cents. Applying 500 pounds to the base class — class A (16.21 basis), we get a package rate of 35 cents. The rate to apply is, therefore, 40 cents. Had the actual weight of the package been 750 pounds, we would acquire a rate of 50 cents. Under the "Index" system we found the Index of this barrel (tiered on end) to be 2.27, and 2.27 applied to the first column of class A (16.21 basis) produces a rate of 40 cents on the 500-pound barrel and 50 cents on the 750-pound barrel

USEFUL FORMULÆ

Applicable to Index, Floor-Load and Cubic Systems

A commodity in cases 2 feet \times 1.6 feet \times 1 foot and weighing 84 pounds each, to earn 16.21 cents per square foot.

A. Index Method:

2 imes 1.6 = 3.2 + .16 (5% loss in pile) = 3.36 feet pile surface.

3.36 divided by 8 (number of packages high) = .42 (Index). .42 \times 16.21 = 6.8082 cents per package.

 6.8082×100 divided by 84 = 8.105 cents per 100 pounds.

B. Floor-load Method:

 $2 \times 1.6 \times 1 = 3.2$ cubic feet package.

3.2 + .16 (5% loss in pile) = 3.36 cubic feet package in pile.

84 divided by 3.36 = 25 pounds per cubic foot package in nile

25 × 8 (maximum practical pile height) = 200 pounds (floor load).

 $\frac{16.21}{8^A} \times 100$ divided by 200 = 8.105 cents per 100 pounds. $\frac{8^A}{100} \times 8105 = 6.8082$ cents per package.

C. Cubic Method:

16.21 cents per souare foot divided by 8 (practical pile height) = 2.02625 cents per cubic foot.

2.02625 × 3.36 (cubic feet package in pile) = 6.8082 cents per package.

From the above data may be evolved the following formulæ:

1. Cubic feet package in pile =

Package weight × pile height
Floor load

Proof: $\frac{84 \times 8}{200} = 3.36$ (cubic feet package in pile).

Cubic feet package in pile = Index × pile height.
 Proof: .42 × 8 = 3.36 (cubic feet package in pile).

3. Cubic weight package in pile $=\frac{\text{Floor load}}{\text{Pile height}}$

Proof: $\frac{200}{8} = 25.0$ (cubic weight package in pile).

4. Cubic weight package in pile = $\frac{\text{Package weight}}{\text{Index} \times \text{pile height}}$

Proof: $\frac{84}{.42 \times 8}$ = 25.0 (cubic weight package in pile).

5. Floor load = $\frac{\text{Package weight} \times \text{pile height}}{\text{Cubic feet package in pile}}$

Proof: $\frac{84 \times 8}{3.36} = 200$ (floor load).

6. Floor load = $\frac{\text{Package weight}}{\text{Index}}$

Proof: $\frac{84}{.42} = 200$ (floor load).

7. Index = $\frac{\text{Package Weight}}{\text{Ploor load}}$

Proof: $\frac{84}{200} = .42$ (Index).

8. Index = $\frac{\text{Cubic feet package in pile}}{\text{Pile height}}$

Proof: $\frac{3.36}{8} = 42$ (Index).

9. Index per 100 pounds = $\frac{\text{Index} \times 100}{\text{Package weight}}$

f: $\frac{.42 \times 100}{84} = .50$ (Index per 100 pounds). .50 × 16.21 = 8.105 (cents per 100 pounds).

10. Index per 100 pounds = $\frac{100}{\text{Floor load}}$

Proof: $\frac{100}{200} = .50$ (Index per 100 pounds).

11. Limiting weight = Index \times 250.

Proof: .42 × 250 = 105 pounds (limiting weight).
.42 at 16.21 cents per square foot = 6.8082
cents per package.
105 pounds at 6.484 cents per 100 pounds =

6.8082 cents per package.

12. Package rate =

Desired earning per square foot × package weight

Proof: $\frac{16.21 \times 84}{200} = 6.8082 \text{ (cents per package)}.$

13. Rate per cubic foot $=\frac{\text{Desired earning per square foot}}{\text{Pile height}}$

Proof: $\frac{1621}{8} = 2.02625$ (cents per cubic foot).

 2.02625×3.36 (cubic feet package in pile) = 6.8082 (cents per package).

14. Rate per 100 pounds =

Desired earning per square foot X 100

D	estred earning per square root X 100	
	Floor load	
	16.21 × 100	1.
Proof	$\frac{1000}{1000} = 8.105$ (cents per 100	pounds).

15. Rate per 100 pounds =

Index imes desired earning per square foot imes 100

Proof: Package weight $.42 \times 16.21 \times 100$

= 8 105 (cents per 100 pounds).

PACKAGE RATING STEPS

Minimum charge per package—1/2 cent

Packages	from	1/2 C.	to	2½c.	_	1/4 C.	rating	steps.	
Packages	from	2½c.	to	5c.	_	½c.	rating	steps.	
Packages	from	5c.	to	10c.	_	1c.	rating	steps.	
Packages	from	10c.	to	20c.	_	2½c.	rating	steps.	
Packages	from	20c.	to	50c.	_	5c.	rating	steps.	
Packages	over	50c.				10c.	rating	steps.	

When packages fall between ratings, the higher rate will govern.

TABLE OF INCHES REDUCED TO DECIMAL FRACTION OF A FOOT

Inches	Decimal	Inches	Decimal
1/4	021	61/4	
1/2	042	6½	= 10
8/4	062	6%	
1	083	7	
11/4	104	71/4	604
1½	125	7½	
134	146	73/4	
2	167	8	
21/4	187	81/4	
2½	208	8½	
23/4	229	83/4	
3	250	9	
31/4	271	91/4	771
3½	292	9½	
33/4	312	934	812
4		10	833
41/4	354	101/4	854
41/2		10½	875
4%	396	10¾	896
5	417	11	
51/4		111/4	
5½	458	11½	958
5%	479	113/4	
6	500	12	1.000

AVERAGE OCCUPANCY OF WAREHOUSE SPACE

The total available space as defined on page 37 is the basis of all computations and estimates. A portion of this space is necessarily permanently unoccupied, and this has been divided into two classes—aisle space and working space. Another portion is sometimes occupied and sometimes unoccupied, and this has also been divided into two classes—waste space and idle space. All of these classes will vary in different warehouses and with different lines of business and the last one will vary as between different seasons or years.

Aisle Space.—The permanent aisles required for the economical handling of goods from door to pile and from pile to door, or required by the fire regulations to furnish access for firemen, are estimated at from 20 per cent to 25 per cent. No warehouses were found where the actual figure was less than this estimate, and while there are many where it must be more, it was not thought proper to take into consideration a manifestly badly designed or poorly laid-out warehouse or an unsuitable building used for warehouse purposes.

Working Space.—It is well known to all warehousemen that some vacant space is necessary at all times, or practically all times, to provide for regular customers; to furnish room for weighing, inspection or examination; sampling; rehandling of any kind, and to take care of unexpected demands for space. No warehouse can hold its customers long unless it constantly, or at least generally, has on hand some stock of the only line it has to sell, namely, space for the storage of merchandise. How long can a merchant hold his trade without having any stock to fill an order? The necessary average of working space has been estimated at 5 per cent to 12 per cent, and this minimum is certainly conservative.

Waste Space.—The space left vacant by partial delivery of block or bulk lots and the space left vacant by failure of lots as received to entirely fill any space obtainable at the moment. This waste space is not to be readily estimated, but it is there just the same. Even unit lots of merchandise cannot be packed in a warehouse like toy building blocks in their box. Waste space is estimated at 0 to 8 per cent, and again the minimum is manifestly low.

Idle Space.—It is well known that there come in our business dull years or seasons that show a surplus of vacant space and deficit of earnings that must be taken care of in good years. In 1913 and 1914 Massachusetts warehouses averaged less than 40 per cent capacity or 30 per cent available floor space occupied. Next to aisle space this is the largest item of un-

occupied space and it is one that cannot be avoided. The difference between the maximum and the minimum demand for storage is very great, and if warehouses as a whole are to be reasonably prepared to take care of the peak load they must necessarily average a considerable proportion of idle space. What that proportion is cannot be accurately determined, but an estimate between limits can be made. Those limits have been set at 0 to 40 per cent. That maximum has undoubtedly been exceeded, but exceptional cases should not be considered in determining averages, and the maximum here used represents a not uncommon occurrence.

The result of these various estimates is:

Aisle space (including space occupied by columns)20% to 25%	
Working space 5% to 12%	
Space permanently unoccupied	25% to 37%
Space unoccupied at times	0% to 48%
	250/2 to 250/

In other words, the maximum and minimum percentages of occupancy are respectively 75 per cent and 15 per cent, the extremes of vacancy being 25 per cent and 85 per cent. The mathematical average is 45 per cent, but it has seemed to the committee that good business management in a standard warehouse should produce a little better than that, and so the 50 per cent figure has been used.

In considering this it must not be forgotten that 50 per cent of available floor space occupied does not mean that the warehouse is only half full. It means that the warehouse is three-fifths to three-quarters full. From 25 per cent to 40 per cent of "available space," although it is "available" for business purposes, is not "occupiable" for goods on storage as it is necessary for aisles and working space. When a warehouseman has filled his occupiable space—from 60 per cent to 75 per cent of his available space—he is done, he is out of business for the time being, he can take no more business until after he has delivered something. That means that he must discommode old customers and decline new ones; his working force is idle though his payroll is still active and his handling

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account is developing a balance on the wrong side.

The committee believe that these estimates are conservative and that the conclusion is defensible.

The warehouse business has in many cases been very unprofitable in the past as a result of ignorant competition due to an absolute lack of knowledge of the cost of handling merchandise.

One of the most serious mistak is has been losing sight of the fact that there is a heavy overhead expense attached to handling operations. This oversight has practically made bankrupts of many warehouse concerns whose executives were experts on general problems and the handling of labor.

Unusual conditions, due largely to the war, have created an extraordinary demand for storage facilities. This has resulted in some warehouse concerns enjoying an era of prosperity who were in a rather precarious financial condition before the war. The demand for storage facilities caused many new warehouse concerns to enter the field. The inevitable reaction with its attendant period of competition requires careful consideration and demonstrates the need of every warehouseman in the country for a sound fundamental basis* for complete knowledge of his own business.

The unscientific method commonly used for estimating handling costs was to determine the actual cost of the in movement of the goods; an arbitrary amount for delivery (varying all the way from 50 per cent to 150 per cent of the in cost) was added as an estimate of the probable delivery cost and the price was then quoted slightly, if any, higher than the resultant figure. Nothing was added for overhead expense, nor was consideration given to the various additional services furnished.

This method, when wages of warehouse labor averaged 20 cents per hour, made the handling rate appear to be about the same as the prevailing rate for storage. From this grew up the rough and ready idea of charging the same amount for handling as for one month's storage. Thus, the first month's charge would include the receiving and delivering of the merchandise and would be twice the charge for each succeeding month.

The actual result of following this method has been that some commodities were carrying the burden for others, or in other words some commodities were paying an excessive rate of profit while others were handled at an actual loss; obviously the warehouseman would be far better off were he to discontinue accepting for storage the latter class of merchandise, if increased rates could not be obtained. By the same reasoning, when he determines the line of merchandise which pays the excessive profit, by catering to that line, possibly somewhat reducing his rates, he may apparently increase his final net income.

Studies by experts have so far shown that throughout the country the average overhead expense is at least 125 per cent of the direct payroll cost of laborers and checkers actually engaged in performing any particular handling operations.

The old method was in cost, plus estimated out cost, plus profit, or arbitrarily arrived at by making the rate the same as the storage rate. The correct method is in and out cost plus overhead, plus profit. Ten to 25 per cent is a very conservative amount to add to the combined direct labor and overhead cost of handling, for profit.

Wages have advanced to several times those paid since the old method of charging equal rates for storage and handling was first used. Taking into consideration these factors of increased wages, overhead expense and profit, it will be found that equitable handling rates may often be three or four times the rates shown in tariffs even now in use in some sections of the country, while, per contra, handling rates for some commodities may be less than the rate for storage.

The absorption in the handling charge (usually billed with the first month's storage) of the cost of unloading and loading cars, transfers from wharves to warehouses cartage, weighing and other services has been a growing evil. It has in effect given indirect rebates to certain customers and substantially added to the losses of the warehousemen, or reduced his profits. It has been proved that in some instances the cost of handling and other services absorbed has made it impossible to earn one cent from certain lots of merchandise until they have been in store four months or more, actual losses being incurred on lots removed from store within shorter periods.

The simplest handling operation is the receiving of goods from the tailboard of a truck, the hoisting and piling in warehouse and the redelivery to the tailboard of a truck (other services being sometimes required and sometimes not); it is therefore good accounting practice to make this the base operation charged for in the first month and make extra charges for extra services. Thus car loading and unloading should be charged for separately, as well as cartage, weighing or any other service required, each being based on productive cost plus overhead, plus profit.

In these days of advancing wages, cost figures at the time goods are received may be based on a wage scale far lower than when the goods are delivered. The present method of billing for receiving and delivering allows no opportunity of taking care of this possible source of loss. The proper method of handling this phase of the subject would be to charge for the handling in when goods are received and to charge handling out to the party then owning the goods when delivery is made. This is such a radical charge that it is not deemed advisable to make such a recommendation at this time.

It is very essential that much data be secured in all parts of the country as to the productive labor cost of handling all kinds of merchandise. The American Warehousemen's Association has established a Central Bureau for the purpose of compiling data concerning handling costs; this information is being secured from all sections of the country and its value to a warehouseman cannot be overestimated.

Productive labor as used in this report is understood to mean the wage cost of the laborers and checkers while actually employed on an operation for which the warehouse is making a charge.

In order to make these records valuable in all sections of the country, they should be computed on a man-hour basis. By the use of man-hours real comparison may be made and results may be easily translated into dollars and cents by applying the wage per hour prevailing in any particular locality.

In addition to the establishment of the Central Bureau, information bureaus in connection with local associations of warehousemen with paid actuaries are being established throughout the country. Exchange of information in regard to man-hour costs between different parts of the country can thus be readily accomplished and all sections can quote reasonable rates even on commodities with which they are unfamiliar.

An example showing the method of applying this system of handling charges follows:

RECEIVING AND DELIVERING 1037 BAGS TAPIOCA

Average Weight 152 Pounds

Receiving—	Total Man-Hours	Man-Hours Per Pkg.
1 Checker—9 men 5¼ hrs	52.50	.05
Delivering— 1 Checker—5 men 9½ hrs	57.00	.054
	109.50	.104

Labor computed at 55 cents per hour.

Total Cost		Cost Per 100 Lbs. in Cents
Labor cost, 109.50 man-hours at		
55 cents \$60.23	5.8	3 81
125 per cent overhead 75.29	7.3	4.80
\$135.52	13.1	8.61
10 per cent profit	1.3	.86
\$149.07	14.4	9.47

As the next package rate step above 14.4 is 15, this would be the handling rate to apply, assuming the example to be a fair average productive labor cost.

A method of securing productive labor costs as well as amount of overhead expense is shown in the later sections on Pay-Roll Division and Determination of Overhead.

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UNIFORM COST ACCOUNTING

Uniform systems of accounts and statistical records form the bedrock upon which any rate foundation or structure must be built if the building is to stand the tests which are bound to be applied either by customers or by public officials. This is as pertinent to warehousing as it is to transportation or any other form of public utility.

In calculating rates, statistical data must be available from many warehouses in order that averages may be obtained upon which to establish standards. Uniform systems of keeping the accounts and statistics by the warehouses will be necessary in order to justify rates made for storage, handling, car unloading and loading, or any other service rendered.

A suitable system of uniform accounting will necessitate:

I. CLASSIFICATION OF EARNINGS OR RECEIPTS. Uniform classification with separate accounts for these earnings from all important sources:

(a) Storage. (b) Handling

Note.-Handling is here understood to mean the in and out handling from sill to sill of the warehouse, customarily charged in the first month.

(c) Weighing and sampling. (d) Miscellaneous extra services. (e) Loading and unloading cars.

(f) All other miscellaneous sources of revenue.

II. CLASSIFICATION OF EXPENSES.

Uniform classification of expense of operating, with separate accounts sub-divided as in earnings.

(a) Storage.

(b) Handling (corresponding to b, c, and d, under Earnings).

Car service. (e)

(f) Expenses connected with miscellaneous sources of rev-

III. DETERMINATION OF INVESTMENT.

(a)	Plant	Land Buildings Private Street
(b)	Equipment	Elevators Trucks, etc.
(c)	Trackage facilities	Land Car Tracks Car Platforms

IV. DETERMINATION AND APPLICATION OF OVER-HEAD EXPENSES.

All payroll items and other expenses which cannot be applied directly to Storage, Handling, Car Service, or any other particular service, must be analyzed and distributed according to a uniform plan. These being added to the direct costs, the entire or true cost of each service will be found.

CLASSIFICATION OF EXPENSES IN DETAIL Expense (A) Storage

The storage expenses include the following items:

RENT, OR IN LIEU OF RENT. 1. Seven per cent on investment including buildings, land

occupied by buildings and interest, taxes and insurance during construction. 2. Depreciation-2 per cent on value of brick or concrete

buildings and 3 per cent on frame buildings. 3. Obsolescence.

4. Fire insurance on buildings.

5. Taxes, Federal, State and Municipal, applicable to real estate

6. Repairs to building.

7. Landlord's risk, amortization and profit on investment.

ADMINISTRATION AND OPERATING EXPENSES, TAXES,

1. One-third of executives' salaries, salaries of departmental heads, office salaries, general office and miscellaneous expense.

2. Watching.

3. Advertising.

- 4. Interest on working capital.
- 5. Taxes. Applicable to storage.
- 6. Contingencies.

Explanatory Notes (Expense (A) Storage)

INVESTMENT.

If the plant is rented, estimated values should be used.

Depreciation as usually allowed by the Internal Revenue Department is 2 per cent on brick or concrete buildings and 3 per cent on frame buildings.

OBSOLESCENCE.

Obsolescence as allowed by the Internal Revenue Department should be given due consideration.

REPAIRS.

This item comprises only ordinary repairs to keep buildings in good condition. Extraordinary repairs increasing the value of the plant should go to capital or investment accounts.

GENERAL EXPENSES.

An analysis of a number of warehouses shows that about two-thirds of the time of the office employes, and therefore the management also, is concerned with the various handling operations. Storage is rental and can be carried on by a very small force if a contractor or some other party attends to the handling. Office expenses, such as telephones, office coal and light, and sundry expenses are also included in this item.

Watching is for the protection of the property and reduces the fire insurance rate. It, therefore, is a proper storage expense.

ADVERTISING.

Advertising for storage only belongs here. The warehouseman's principal business is that of storage, and handling is incidental to it; accordingly it is proper to consider advertising for storage purely a storage expense. Advertising for laborers is a labor expense.

INTEREST ON WORKING CAPITAL.

A certain amount of working capital is necessary to carry bills receivable.

EXPENSE (B) HANDLING

- (C) WEIGHING AND SAMPLING
- (D) MISCELLANEOUS EXTRA SERVICE
- 1. Actual warehouse labor employed productively, including warehouse clerks, checkers and weighers.

2. Non-productive labor, including:

Moving merchandise.

Holiday time.

Janitor and cleaning. Undistributed labor.

3. Liability insurance.

- 4. Seven per cent on the investment in equipment, including elevators, whips, trucks, scales, etc.
- 5. Taxes applicable to handling whether assessed on value of equipment, amount of working capital or on income.
 - 6. Ten per cent depreciation on Item 4.
 - 7. Repairs to equipment.
 - 8. Power and light.
- 10. Two-thirds of executives' salaries, salaries of departmental heads, office salaries, general office and miscellaneous expense. (Less amount charged to car service.)

11. Interest on working capital.

12. Miscellaneous supplies and expenses connected with labor. Note A .- Items 2 to 12, inclusive, divided by item 1 will produce the percentage of overhead expense for handling.

Note B .- Item 10 includes:

Executive salaries

Salaries of departmental heads

Office salaries

Office supplies Telephone Water Coal for office heating Contributions

and all miscellaneous small items of expense not directly chargeable to Storage, Handling, Car Service or other miscellaneous services.

Explanatory Notes

PRODUCTIVE AND NON-PRODUCTIVE LABOR.

The method of finding these amounts by divisions of the payroll is discussed in the section devoted to this subject.

EQUIPMENT INVESTMENT.

The investment in equipment should be determined by the warehouseman to furnish a basis for these figures.

POWER AND LIGHT.

Furnishing of power or light is a labor service, varying according to the amount of merchandise handled, storage as such not requiring either. They are therefore handling expenses.

(Storage should be kept a simple space rental proposition.)

This refers to breakage and loss claims due to negligence in handling merchandise. There are some claims which might be considered as storage liability, such as damage from leaking roofs. Each claim should be analyzed and placed where it

PORTION OF GENERAL EXPENSES.

Where the labor covers more than one service, it is de-

fensible to distribute the overhead expense proportionally according to the percentage the gross billing for each service bears to the total gross billing for labor.

MISCELLANEOUS EXPENSE.

This covers items of general expense, directly chargeable to labor.

Lubricants for equipment, general care of equipment and employment departments are some items which are included.

EXPENSE (E) CAR SERVICE

- 1. Actual labor loading and unloading cars.
- 2. Non-productive labor.
- 3. Liability insurance.
- 4. Seven per cent on investment in land, trucks and platforms.
 - 5. Taxes applicable to Car Service.
 - 6. Five per cent depreciation on investment in tracks, etc.
- 7. Repairs to tracks, etc.
- 8. A share of executives' salaries, salaries of departmental heads, office salaries and general office and miscellaneous expenses.
 - 9. Interest on working capital.
 - 10. Contingencies.

Note.—Item 8 should be determined as follows: Find the percentage relation which the billings for loading and unloading cars bear to the total billings, exclusive of storage. Credit the amount represented by this percentage to Item 10, Expense (B) Handling, (C) Weighing and Sampling, (D) Miscellaneous Extra Services, and charge a like amount to Item 8 under Expense (E) Car Service.

System Illustrated by a Standard Warehouse Constructed in 1920, Showing Initial Cost of Plant With Estimated Capital, Fixed Charges, Operating Expenses, Operating Revenues and Net Return.

This example has been prepared after exhaustive study of numerous estimates furnished by competent authorities, as a conservative illustration of the rates required to produce a reasonably adequate return. The majority of warehouse buildings constructed during 1920 have exceeded the estimated costs indicated below.

It should be carefully noted that this illustration covers a conservative estimate of the average cost of this type of warehouse and that the conclusions as to rates reached through its use must be revised upward or downward as the case may be, through consideration of local conditions, depreciation, land values, accessibility, etc.

SPECIFICATIONS

Standard re-inforced 200' × 100' (outside dimensions), six stories and basement, flat slab construction with brick or hollow tile panels. Three 12" fire walls of brick or hollow tile equally dividing building into four sections, and two concrete enclosed stairways. Clearance between floors 10' except 15' on first floor. All floors having not less than 250 lbs. per square foot rated floor-load capacity served with standard dry pipe Sprinkler system, two source supply, with tank of 50,000 gals. capacity. Equipment consisting of four (4) 8000 pound elevators, four (4) double whip hoists, electric lights, intercommunicating telephones between office and each floor, operating office, shipping clerks' office and room for laborers, necessary plumbing, heating and furniture for offices and laborers' room.

(No figures have been included for interior tiering machines and wiring, but these should be installed in any warehouse handling heavy materials.)

Facilities for handling cars consisting of two (2) railroad tracks with capacity for five (5) cars each, platform 10' wide on track side of building.

Area outside walls $200' \times 100' \times 7 = 140,000$ square feet Area inside walls $195' \times 98' \times 7 = 133,770$ Area available (taking out office, shipping and laborers' rooms, elevators and stairways) =123,000

ESTIMATED COST-1920

For buildings 20,000 square feet For railroad siding and 7,000 platform For siding connection.. 1,000

28,000 square feet at \$2.00 \$56,000.00

(No allowance is made for private streets which in many cases are necessary.)

BUILDING

Construction, engineering and supervision including equipment and tank 140,000 square feet at 525,000.00 Two (2) tracks and platform 200' × 10' 8,000.00 EQUIPMENT.

Elevators, whips, wiring, heating, plumbing, telephones, partitions and furniture for offices, shipping room and laborers' room 50,000.00 Organization and charter 2,000.00 Interest on land during construction-1 year 3,920.00 Taxes and insurance during construction 11,620.00 Interest on building cost during construction 10,000.00 83,460.00 Working capital

Capital Assets\$750,000.00

(A) STORAGE Estimated Income

\$118,080.00

Note.—Main aisles and columns occupy 25 per cent of total space inside of walls after deducting elevators, stairways, office, shipping and laborers' room. The above basis of 50 per cent therefore presupposes an average storage occupancy throughout the year of 66 2/3 per cent of actual occupiable storage space.

Estimated Expenses

RENT. (Or in lieu of rer			
1. Interest on investmen	t:		
Building	\$525,000.00		
Land, portion oc-			
cupied by build-			
ing only	40,000.00		
Organization	2,000.00		
Interest, taxes and	2,000.00		
insurance during	95 540 00		
construction	25,540.00		
	\$592,540.00	at 701	\$41,478.00
2 D	\$592,540.00	at 170	φ41,410.00
2. Depreciation, build-			
ing above founda-	F00 000 00	1.000	10 000 00
tion	500,000.00		10,000.00
3. Obsolescence	525,000.00	at 1%	5,250.00
4. Fire insurance 90%			
of value of building			
above foundation .	450,000.00	at % of 1%	562.00
5. Taxes, Federal, State			
and Municipal			16,000.00
6. Repairs to buildings	500,000.00	at 1%	5,000.00
7. Landlord's risk, amor-	,		
tization and profit			
on investment	592,540.00 a	t 21/2 %	14,814.00
	,		
Total Rent (Or in			
20001 200110 (01 111			

ESTIMATED ADMINISTRATION AND OPERATING EXPENSES, TAXES, Etc.

lieu of rent)

 One-third of executives' salaries, salaries departmental heads, office salaries, gener 	
office and miscellaneous expense	
2. Watchmen and watching supervision	2,500.00
3. Advertising	
4. Interest on working capital-\$50,000 at 7	% 3,500.00
5. Taxes	
6. Contingencies	0 000 00
Total administration and operating expense	es,
taxes, etc	\$22,476.00
Total storage expenses	
Net income from storage	2,500.00

Analysi

			Square	Dollars	Cents
			Feet Floor	Per Sq. Ft.	Per Sq. Ft.
			Space Occupied	Per Year	Per
Storage income\$118,080.00			61,500	1.92	16.00
Storage expenses. 115,580.00 Profit	divided	by	$61,500 \\ 61,500$	1.88	15.67

INVESTMENT.

Attention is directed to the fact that the profit here indicated covers Storage only, profit arising from ownership of the building being provided for under Rent, on this page. The proprietor's salary is included in executives' salaries.

Expense Items not Included in Estimate

Bailee's responsibility and risk. Loss and damage on goods. Bad debts. Maintenance of private highways.

Income Items not Included in Estimate

Short periods of storage.

5. Taxes

6. Depreciation on tracks, etc.

7. Repairs on tracks, etc.

8. Share of executives' salaries, office salaries, etc.

Estimated Income	
Receiving and delivering billed	\$80,000.00
Weighing and sampling billed	7,000.00
Extra service billed	9,000.00
Total Income	\$96,000.00
Estimated Expenses	
1. Actual productive labor employed in receiv-	
ing and delivering, weighing and samp-	
ling and extra service	\$38,000.00
2. Non-productive labor	13,000.00
3. Liability insurance	1,500.00
4. Interest on investment in equipment—	
\$50,000 at 7%	3,500.00
5. Taxes	1,600.00
6. Ten per cent depreciation on Item 4	5,000.00
7. Repairs on Item 4 at 5%	2,500.00
8. Power and light	3,000.00
9. Claims	500.00
10. Two-thirds of salaries, etc \$20,000.00 Less amount charged to Car	
Service 5,455.00	14,545.00
11. Interest on working capital—\$26,000 at 7%	1,820.00
12. Miscellaneous expense	4,000.00
Total Expense	\$88,965.00
Profit	7,035.00
INVESTMENT.	450 000 00
Equipment	\$50,000.00
working capital	26,000.00
5005 11 11 1 50000 0000	\$76,000.00
7,035 divided by $76,000 = 9.26%$ profit on	
investment.	
Total expense	\$88,965.00
Productive labor	38,000.00
Handling overhead expense	\$50,965.00
Per cent overhead expense 50,965 divided by	
38,000 = 134%.	
(E) CAR SERVICE	
Estimated Income	
Unloading cars	\$21,000.00
Loading cars	15,000.00
	\$36,000.00
Estimated Expenses	
1. Actual labor loading and unloading cars	\$14,000.00
2. Non-productive labor	6,800.00
3. Liability insurance	700.00
4. Interest on investment at 7%:	
Land \$16,000.00	
Tracks and platform 8,000.00	

\$24,000.00

1,680.00

750.00

400.00

750.00

5,455.00

9. Interest on working capital—\$7,460 at 7% 10. Contingencies	522.00 1,678.00
Profit	\$32,735.00 3,265.00
INVESTMENT.	
Tracks, etc.	\$24,000.00
Working capital	7,460.00
	\$31,460.00
3,265 divided by 31,460 = 10.38% profit on investment.	
Total car service expense	\$32,735.00
Productive labor	14,000.00
Car service overhead expense	\$18,735.00

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PAY-ROLL DIVISION

In order that the warehouseman may determine his costs according to the method proposed, it becomes necessary to distribute the pay-roll. The foundation of this is the use of daily time cards, either in the hands of the individual laborers or gang foremen, giving the time of the man or men, information as to the lot of goods handled and the different services performed. To be of real value this must be carefully carried on with competent supervision and made to balance with the pay-roll. A portion of the results will be productive labor costs and the balance non-productive items, such as idle time, cleaning, moving merchandise to make room, etc.

DETERMINATION OF OVERHEAD

Next must be ascertained the overhead expense which applies to handling and other services. This is done by adding to the non-productive labor, the liability insurance, interest,

depreciation, taxes, repairs to equipment and other items as shown in the classification of Expense B, C, D and E.

COST DEPARTMENT

We recommend that each warehouseman, if he has not already done so, organize a Cost-Department, headed by a man who combines good accounting ability with a practical warehouse experience, furnishing him with as much assistance as is necessary to keep the work up to date at all times.

The American Warehousemen's Association has established a Central Bureau, referred to elsewhere in this work, which is prepared to furnish warehousemen specimen forms and information concerning methods of keeping cost figures. The Primer furnished by the American Warehousemen's Association outlines a simple method of cost finding.

AN EQUITABLE PROFIT IN EACH DEPARTMENT

Each department of the warehouseman's plant should show a profit at the end of the year. No service should be rendered without profit. All profits should be reasonable.

Thus the Standard Warehouse Example shows profit after making due allowance for profit on the building, interest on the investment, and after salary to the proprietor, as follows:

Storage		\$2,500.00
Handling:		
	sampling and miscellaneous	
		7,035.00
Car Service		3,265.00
Total		\$12 800 00

No department should perform a service free or below cost to attract storage business, for indirect rebate is thereby given which will injure the business far more than the few dollars received for the storage gained.

This ideal condition, it is safe to say, has not heretofore existed in the warehouse industry.

CONCLUSION

The foregoing system of cost accounting and basis for tariffs, if carried out intelligently, will give the warehouseman the following knowledge:

Income, cost and profit of maintaining and operating each unit of warehouse space.

Income, cost and profit of handling each lot of merchandise from sill to sill.

Income, cost and profit of loading and unloading cars.

Income, cost and profit of weighing, sampling and all other services for which separate charges are made to the customer.

These fundamental facts will be of untold assistance in quot-

ing and defending prices and setting a new and higher standard for the entire industry. A warehouseman will then have no hesitation in quoting rates to his customers because he will have that secure feeling that his rates are based upon proven costs with a legitimate profit added. These will also permit the warehouseman to exercise intelligent discrimination in the taking of merchandise to be stored by him.

Then, and only then, will the warehouse industry be enabled to ride out the squalls and serious storms which are bound to occur from time to time in the business world.

Household Goods Committee's Report

THE household goods Central Bureau committee's report on cost accounting explains that the committee did not attempt to go into the origin of cash book or journal entries except as they apply to the general cost finding method recommended, adding: "No doubt, investigation and recommendation of a simple system or original entries would be of value to our members." Regarding the present-day standard warehouse the report says:

"The first problem we are confronted with is to determine the actual space cost. Two warehouses of the same construction in the same locality may have a very different space cost owing to the varying costs of buildings at the time of erection, or because of a favorable or unfa-

vorable lease. Therefore, it is recommended that the first step in determining the actual space cost be based on 7 per cent of the present value of the land and the appraised sound value of the buildings thereon, whether the property is owned by the operating company or leased. Recent rulings of Public Utilities Commissions approve 7 per cent as the factor to be used."

This sub-division's committee comprises William T. Bostwick, Jersey City, chairman; C. A. Aspinwall, Washington, D. C.; S. C. Blackburn, Kansas City; D. V. Murdoch, Pittsburgh; H. L. Halverson, Minneapolis; W. Lee Cotter, Mansfield, O.; William R. Wood, New York City; C. J. Neal, Cleveland. The report follows:

OUTLINE OF WAREHOUSE ACCOUNTING SYSTEM

A-Assets B-Liabilities

(1) Real Estate C-Income-(2) Operating

(1) Real Estate

-(2) Operating (3) Overhead D-Expense-

E-Clearing and General Miscellaneous Accounts

A-ASSETS

1-Cash

2-Accounts Receivable

3-Notes Receivable

4-Inventory (Material and Supplies)

5-Prepaid Accounts

6—Investments (Stocks and Bonds)
7—Real Estate or Leasehold Investment

8-Cartage Equipment

9-Warehouse Equipment

10-Office Equipment

11-Good Will, Copyrights, etc.

B—LIABILITIES

1-Accounts Payable

2-Notes Payable

3-Mortgage

4-Reserves

-Capital Stock

6-Surplus

C-INCOME

1-Real Estate (if property owned).

Leasehold (if property leased).

Credit 7 per cent. of the present value of the land and the appraised sound value of the buildings thereon.

NOTE: (This item is charged to Real Estate or Leasehold Expense Clearing Account.)

-Storage

3-Storage Handling

4—Cartage

-Packing Material

-Packing Labor

-Carpet Cleaning

-Safe Deposit

-Cold Storage

D-EXPENSES

1-Real Estate (if property owned).

Leasehold (if property leased).

Charge Mortgage Interest to Real Estate,

or

Charge Rental to Leasehold

a-Department Rental or Space Charge

b-All direct charges

c-Overhead

3-Storage Handling-

a—All direct charges b—Overhead

4-Cartage-

a-Department Rental or Space Charge

b-All direct charges

c-Overhead

5-Packing Material-

a—Department Rental or Space Charge

b-All direct charges

c-Overhead

6-Packing Labor-

a-Department Rental or Space Charge

b-All direct charges

c-Overhead

7-Carpet Cleaning-

a—Department Rental or Space Charge b—All direct charges

c-Overhead

8-Safe Deposit-

a—Department Rental or Space Charge

b-All direct charges

c-Overhead

9-Cold Storage

a-Department Rental or Space Charge

b-All direct charges

c-Overhead

E-CLEARING AND GENERAL MISCELLANEOUS AC-COUNTS

Credit:

Department space as

b-Storage Handling

d-Packing Material

-Safe Deposit

-Cold Storage

charged to-

a-Storage

-Cartage

1-Real Estate)

Expense Clearing Account or

Leasehold

Debit:

a-(If owned).

a 1-Charge from Real Estate Income

Account C-1

a 2—Repairs

a 3-Taxes (Land and Building only) c-

a 4-Depreciation (2 per cent per an-

num building valuation) e—Packing Labor a 5—Obsolescence (1 per cent per an-f—Carpet Cleaning

num building valuation)

a 6—Insurance

a 7—Heat

a 8-Light

a 9-Water

a 10-Elevator Maintenance

a 11-Power

b-(If leased)

b 1-Charge from Leasehold Income

Account C-1

b 2-Investment in Leasehold (if any)

b 3-Other expenses as per terms of

Lease

Credit:

Credit:

Department space as

-Storage Handling

-Packing Material

-Packing Labor

-Safe Deposit

-Cold Storage

Distribute to the ac-

counts affected

-Carpet Cleaning

charged to-

a-Storage

-Cartage

2-Overhead Clearing Account

Debit: a-Executive Salaries Office Salaries

-Office Supplies -Postage

-Telephone and Telegraph -Advertising -Association Dues -Loss and Damage

i -Insurance (not chargeable to Departments) Estimating Expense

-Corporation Taxes (not including income or excess profit taxes) 1-Interest on loans and discounts

3-Prepaid Clearing Account

Debit: a-Rent

-Insurance h-

c--Miscellaneous

-Profit and Loss, Suspense or other General Accounts not heretofore included

EXPLANATION OF OUTLINE

A-ASSETS and B-LIABILITIES need no explanation

C-INCOME.

- 1-Real Estate or Leasehold: The credit to this account is that amount which represents a proper return based on present value of land and the appraised sound value of buildings thereon.
- 2-STORAGE, 3-STORAGE HANDLING, 4-CART-
- 5-PACKING MATERIAL. 6-PACKING LABOR.
- 7-CARPET CLEANING. 8-SAFE DEPOSIT.

9-COLD STORAGE.

Credit Income Accounts two to nine inclusive, as per outline, with all earnings which belong to each depart-

As many operations require the service of several departments, care should be used in the proper distribution of earnings.

D-EXPENSES

1-Real Estate or Leasehold: If property is owned, charge interest on mortgage.

If property is rented, charge rental.

The difference between credit on C-1 Real Estate or Leasehold INCOME account and this account will be the net Profit or Loss on Real Estate or Leasehold Account.

- -STORAGE. 3—STORAGE HANDLING. 4—CART-AGE.
- 5-PACKING MATERIAL. 6-PACKING LABOR.
- 7-CARPET CLEANING. 8-SAFE DEPOSIT.

COLD STORAGE

a-Department Rental or Space Charge: The first step in the distribution of Department Expenses is to determine the percentage of space occupied by each department. The following plan is recommended:

SPACE CHARGE

- a 1-Obtain the gross cubic feet of space in building.
- a 2-Obtain the gross cubic feet of space occupied by each department, and divide into the gross cubic feet of building, thereby ascertaining the percentage of the building occupied by each department.
 - NOTE: (Be sure to include in Packing and Shipping Department any space which may be set aside for the storing of material, even if such space is not actually in use at the time of making the calculations.

In calculating Cartage space, include all that is occupied for the storage, maintenance or upkeep of all vehicles in use by the Cartage Department.)

- a 3-Charge to each department its percentage of the total space cost as shown by E-1 Real Estate or Leasehold Expense Clearing Account.
- b-DIRECT CHARGES: Charge to each department all expenses or portion of such expenses which belong directly to such department.
- -OVERHEAD: We have remaining all those expenses which it has not been possible to charge directly to any single department.

These will consist of such items as—Executive Salaries, Office Salaries, Office Supplies, Postage, Telephone, Telegraph, Advertising, Association Dues, Loss and Damage, Insurance, Estimating Expense, State Taxes, Corporation Taxes and Interest on Loans and Discounts.

One of the most difficult problems is the proper division of OVERHEAD. After careful consideration your Committee recommends the following plan:

- c 1-Ascertain the percentage of gross business done in each department; take this percentage in each case, and add to it the percentage figures obtained in paragraph a-2, schedule D, being the percentage of the building occupied by each department. Divide the total by two, and use the result as a percentage figure to divide Overhead. (See System illustrated on page 53 under DISTRIBU-TION OF OVERHEAD.)
- Charge to each department its percentage of the total Overhead as shown in Outline-Overhead Clearing Ac-

E-CLEARING AND GENERAL MISCELLANEOUS AC-COUNTS

Clearing Accounts are necessary to combine charges that apply to more than one department, and to distribute the correct proportion of such charges to each departmentthe following clearing accounts are recommended:

- 1-Real Estate or Leasehold
- -Overhead
- -Prepaid Items
- -Profit and Loss, Suspense or other General Accounts not heretofore included

SYSTEM ILLUSTRATED BY APPLICATION TO STAND-ARD FURNITURE WAREHOUSE BASED ON PRESENT COST OF REPRODUCTION

The estimate herein has been compiled from the best information available, and is intended to represent an average. A fireproof furniture warehouse 50 x 100 ft., six stories and basement, built of a concrete skeleton with reinforced concrete floors, beams and columns, brick curtain and fire walls, metal sash with wire glass, fire doors, face brick front with stone or terra cotta trimming, including office, fireproof vault, rug vault, piano room, boiler and fuel room, and necessary toilets and file room. The building to be complete with one electric freight elevator 9 x 20 ft., and one combination passenger and freight elevator 8 x 8 ft., a steam heating plant for the office, piano room and packing room, all necessary plumbing, and wiring for electric lights and power; total cubical size including foundation, elevator shaft, parapet walls-

425,000 cubic feet at the construction cost, without rooms, per cubic foot, 35c..... \$148,750.00 A-2 Cost of land as an average, 15 per cent cost of building 22,312.00

A-3 Interest on carrying charges on building during construction A-4 Interest and carrying charges on land

-Fire insurance on building during construc-

444.00 \$176,871.00

3,470.00

1,895.00

• • • • • • • • • • • • • • • • • • • •	DISTILL	BUITON C	X WAREITOUSING		00
	ANNUAL COST OF CARRYING CH	IARGES	DISTRIBUTION OF OV	ERHEAI)
B-1	Interest, 7 per cent on \$176,871.00	\$ 12,380.97	Example	7	
B-2	Obsolescence, 1 per cent on buildings		\$28,000 equals Volume of Storage Sales	on 40	r cent of total
B- 3	Depreciation, 2 per cent on buildings		25,900 equals Volume of Cartage Sales		
B-4			16,100 equals Volume of Packing Sales		
B-5	Insurance on buildings, 80 per cent C Insurance (\$119,000 at \$2.00 per the			-	
	sand)			100 pe	r cent
			ESTIMATED SPACE OCCUPIED	IN WAT	REHOUSE
	Circ of building 405 000	\$ 19,851.95	BY EACH DEPARTM		LHOUSE
C-1	Size of building, 425,000 cubic				
C-2	feet, gross. Deduction for columns, footers,		Storage Department equals Cartage Department equals		
0-2	parapet walls, aisles, office,	14142	Packing Department equals		
	stairwells, elevator shafts, 50		- Services offers	-	
	per cent of gross space,—			00 per c	ent
	425,000 cu. ft. equals 212,500 cu. ft.		The average of volume of business and space occupied will give the per-		
	SPACE COST		centage of OVERHEAD charged to		
0.0			each department.		
C-3	Leaving salable space of 212,500 cubic feet.	40.15	AMEDACE		
	A	B*	AVERAGE		
		Monthly Cost	Storage—(40 per cent Volume of busi-		
	,	83 1-3%	ness plus 87 per cent) space occupied divided by 2 equals		
0.4	\$19.851.95 annual carrying	occupancy	63½ per cent.		
0-4	\$19,851.95 annual carrying charges of building, divided		Cartage—(37 per cent Volume of busi-		
	by 212,500 cubic feet of sal-		ness plus 5 per cent) space		
	able space equals per cubic		occupied divided by 2 equals		
370	foot, .0934	.00934	21 per cent. Packing—(23 per cent Volume of busi-		
NOT	'E: *The items under column *B represent the monthly charges		ness plus 8 per cent) space		
	on a basis of 83 1-3 per cent		occupied divided by 2 equals		
	capacity operation.		15½ per cent.		
			DISTRIBUTION OF STORAGE	OVER	HEAD
	ANNUAL DIRECT CHARGES		DISTRIBUTION OF STORAGE		B*
D-1	Direct labor\$3,000.00		Ann	A ual Cost	Monthly Cost
D-2	Material 150.00		Au		83 1/3%
D-3	Interest on working				occupancy
	capital, five times menthly income, es-		E-13 63½ per cent of \$11,740.00 di-		
	timated at \$15,000 1,050.00		vided by 212,500 cubic feet equals	.035	.0035
D-4	10 per cent deprecia-			.000	.0000
	tion, 7 per cent in-		SUMMARY		D+
	terest on warehouse equipment, (ware-		Ann	A nal Cost	B* Monthly Cost
	house trucks, tools,		Ain	aar Cost	83 1/3%
	etc.) 170.00				occupancy
D-5	Light and power 900.00		C-4 Space cost per cubic foot	.0934	.00934
	es 270.00		D-6 Direct charges per cubic foot	.0248	.00248
Da	\$5,270.00		E-13 Overhead charges per cubic foot	.035	.0035
D-6	\$5,270.00 divided by 212,500 cu-		Total cost per cubic foot	.1532	.01532
	bic feet of salable space, equals	.00248	_ cont cost per cuoic root	,	.01003
			SYSTEM ILLUSTRATED BY APPLI	CATION	TO STAN-
	ANNUAL OVERHEAD		DARD FURNITURE WAREHOUS		
E-1	Manager\$3,600.00		ENT COST OF REPRODUCTION		
-	1 Bookkeeper 1,800.00		ILLUSTRATION OF ONE FLOOI STRUCTED IN THE BUILDING.	COF RO	OMS CON-
_	1 Stenographer 1,200.00				
E-4	Postage 250.00		A-1 Cost of building, as per C-4, per cubic foot.	.0934	.00934
E-5	Telephone		A-2 Direct charges, as per items D-1	.0004	.00004
	Advertising 1,000.00 Loss and damage, Bad		to D-6, inclusive, per cubic		
	debts 1,000.00		foot	.0248	.00248
E-8	Association dues and		A-3 Overhead, as per item E-13 per	025	0025
FO	traveling expenses 500.00		cubic foot,	.035	.0035
E -9	Car fare and extra expenses 1,000.00		A-4 Total cost of open storage per		
E-10	Corporation taxes 300.00		cubic foot,	.1532	.01532
E-11	Insurance: Workmen's		COST OF ROOMS		
	compensation, Elev.				
	Liability, Accts. Receivable, etc 600 00		B-1 Salable space on one floor of open storage 30,	359 cu. f	
E-12	ceivable, etc 600 00 Office supplies 250.00		B-2 Lost space for room partitions	555 Cu. 1	
			and doors, 15 per cent of		
	\$11,740.00		30,359 cubic feet equals 4,	553 cu. f	t.

B-3	Leaving salable space of 2	5,806 cu. ft	
B-4	Estimated cost of one floor of		
	rooms,	\$9,000	
B-5	Interest, 7 per cent on \$9,000.00		\$630.00
B-6	Obsolescence, 1 per cent on above		90.00
B-7	Depreciation, 2 per cent on above,		180.00
B-8			135.00
B-9	Insurance, 80 per cent Co-Insuran	ce,	18.00
			\$1,053.00
C-1	\$1,053.00 annual carrying charges on cost of rooms divided by		, , ,
	25,806 cubic feet salable space		
	of room storage equals	.0408	.00408
C-2	Cost of open storage per cubic fo	oot,	
	as per item A-4,	.1532	.01532
C 2	Total cost of room storage, per		
C-0	cubic foot,	.1940	.01940

Cold Storage

COMMITTEE'S REPORT

THE coming document of the cold storage Bureau Committee will be, according to Charles L. Criss, general secretary of the A. W. A., in his report, "a most valuable work, covering a wide range of subjects relating to construction, operations, etc.; it will be the most valuable work on these subjects in existence, and particularly in their relation to cold storage space and operating costs."

The committee's report was made by W. B. Mason, Providence, the chairman, who explained that four subcommittees are at work on a standardization of basis for rates, their labors covering, first, investment and fixed charges; second, classification of commodities; third, handling and uniform cost accounting; fourth, refrigera. The reports of these sub-committees are nearing conclusion, Mr. Mason stated; when all were in and approved by the general and executive committees, the completed work would be printed at an early date "in order that all interested may learn of the facts revealed and become familiar with the system; if this can be done in early spring it will undoubtedly be of benefit to the industry this coming season, and at our meeting next December we should all understand and be able to talk the same language." Regarding the work of the refrigeration committee, Mr. Mason said:

"It is hardly to be expected that the refrigeration com-

Concluding page of Central Bureau report of Household Goods Committee

Profit and	Loss St		, Month			192	
	STO	BAGE		TAGE	PAC	KING	I
	Items	Amount	Items	Amount	Items	Amount	Amou
Totals of Recom's							
	,		PENSE				
DIRECT CHARGES	Items	Amount		Amount	, Items	Amount	
	Labor Material Int. & Depr. on Whse. Eq Light Power Int. on Wrkg. C.		Wages Gas & Oil Mainten. Repairs Road Ex. Garage Rent Int. on Inv. on Wrkg. C.		Labor Wages Bonuses Material Lumber Paper, etc. Wrkg. C. Dely. Ex.		
Totals of Direct Charges	-		-				
Building Inc. & Expense (Divide Tot. on space basis Depreciation		Storage		Cartage		Packing	
Obsolescence Taxes Insurance Int. on Valuation Total Building Inc. and Expense					,		
General Overhe (Fig. Tot. & then distr departments.	ad ibute to	Storage		Cartage		Packing	
Salaries Office Supplies Postage Telephones Advertising Loss, Damage and Bad		10					
Assoc. Dues and Trav. Carfare and Extra Expe Corporation Taxes Insurance							
Tots. General Overhead		. *					
TOTAL EXPENSE							

mittee can at this time make distribution of power house cost to commodities, and their effort will be limited to a classification for cooler and freezer service, in which the initial service will be included. The distribution of refrigeration to commodities will require considerable research work, and it is recommended that a special committee be appointed to investigate the subject and determine the practical application of differentials to tariffs."

Story of the Convention of the

NATIONAL FURNITURE WAREHOUSEMEN'S ASSOCIATION

WHITE SULPHUR SPRINGS, West Va., Dec. 14.

THE National Furniture Warehousemen's Association, at its semi-annual convention which closed here to-day, voted to prepare and publish a booklet explaining to the storage fraternity and to the general public the advantages of dealing with members of this new organization. The booklets will be so prepared that they

can be printed in quantity with a provision for the imprint of the individual members' advertisements on the title page and sold to the individual members at cost. In this way it was considered that wide distribution would be given to the booklet without taxing the association's treasury.

This action was taken after recommendation by the publicity committee, Walter E. Sweeting, Philadelphia, chairman. The same committee suggested also that the members use a uniform stencil on all packing and crating jobs for shipment, to indicate that the work had been done by a member. This recommendation was adopted and the plan will be put in operation.

Many informative discussions were held and reports submitted during the convention proceedings Saturday, yesterday and to-day. At the close of the meeting F. C. Allen, secretary of the Lyon Fireproof Storage Co., Los Angeles, issued an invitation from the Pacific Coast members to the association to hold its 1921 winter meeting at Los Angeles. No action was taken to-day because the authority to name the convention city rests with the directors. In order to guide the directors, however. Charles S. Morris, New York, president, requested all those in favor of Los Angeles to signify by raising their right hands. The vote affirmatively was almost unani-

THE convention opened with reading of reports by President Morris and Ralph J. Wood, Chicago, secretary. Mr. Wood said there had been approximately \$13,000 in dues thus far and that the balance was more than \$9,000. With 3,000 warehousemen in the United States and with a membership already exceeding 400, the association expects to have at least 500 members by July 1, 1921, Mr. Wood declared.

One of the early discussions related to the advisability of favoring or disapproving of municipal ordinances under which warehousemen would be required to pay removal licenses. J. W. Glenn said such ordinances should be fought, as they constituted "a system of espionage that is un-American." William R. Wood, New York, said that warehousemen, in combatting such ordinances, should have something practical in the way of cost sheets in order to show municipal authorities they were wrong in their estimates of warehousemen's profits. Cost sheets in New York had enabled the storage men to defeat such an ordinance proposed there, Mr. Wood said, the warehousemen proving they were not profiteers and the measure

being withdrawn. The question of a uniform law covering operation of motor trucks was brought up. Milo Bekins, Los Angeles, said warehousemen were vitally interested in this subject. It was brought out that the association would be represented at the conference of the National Association of Traffic Officers at Washington on Jan. 10, when the subject is to be discussed before that body.

As to what action should be taken in settling legitimate and illegitimate claims, Walter C. Reid, New York, urged liberality in settling, saying this policy was good advertising for the warehouseman; under two per cent in actual expenditures in the settlement of claims was a fair average, he thought. This estimate was two per cent of the entire warehouse business and not of the claims filed, Mr. Reid explained in answer to a question.

The question was brought up as to whether it would be wise for the warehousemen of a given community to employ a joint inspector in the settlement of claims. This was opposed by some speakers on the theory that a joint inspector would, in endeavoring to cut down on expenditures, make no effort to take away the "sting" felt by the customer, whereas personal settlement of claims brought the warehouseman closer to the patron.

On the question "Can the packing of household goods be standardized, there

by inducing the carriers to accord a lower rating to goods packed in conformity with such standard?", F. L. Bateman, Chicago, explained that the railroads will not specify a standard; but he suggested that it would be possible for the association to adopt a standardized method of packing which might some day be recognized by the railroads and have some influence on the freight rate. He further explained that improper packing was not always the fault of the warehouseman; the customer often limits the warehouseman on the amount of money that can be expended on a particular job. R. L. Orcutt. St. Louis, stated that the St. Louis practice of making no estimates on packing jobs had brought about a higher standard of packing in his city; all warehousemen in St. Louis at present work on a time and material basis and in this way are able to satisfy themselves as to the proper kind of packing necessary for any shipment.

In discussion as to how household goods should be packed for foreign shipment, opinion was expressed that the most satisfactory method thus far devised is the lift-van system as conducted by the Bowling Green Storage & Van Co., New York. When these lift-vans are not available it was advised that all goods be first wrapped in waterproofing material and then strongly boxed in cases throughly lined with waterproofing material.

In his report as chairman of the committee on insurance Grant Wayne, New York, advised the organization of a cooperative insurance company by the association. He pointed out that the warehousing industry had proven a very profitable line for the regular insurance companies. He said there had been no disastrous fires in the household goods storage industry during the past ten years. Alluding to motor van insurance he stated that although warehousemen are called upon to pay the same rate that any motor truck owner pays, these vans for the most part are operating in the residential district, out of the dense traffic, and therefore are less subject to accident or damage.

The insurance committee was instructed by the association to investigate the possibility of organizing a co-operating insurance company and to make a definite report at the July meeting.

Discussion of the report of S. C. Blackburn as chairman of the committee on uniform methods centered on proper procedure in the sale of goods for storage charges. Recent court tests have convinced warehousemen that a complete description of goods to be sold must be given in the legal advertisements published in the local newspapers, it was brought out: each article must be listed as described in the warehouse receipt.

55

The discussion on the adoption of uniform method of consigning shipments to fellow members resulted in the following conclusion: shipments of household goods should be made to the order of the shipping warehouse to the owner of the goods in care of the receiving warehouse, being sure always to include the street address of the receiving warehouse.

F. L. Bateman pointed out that this subject had been discussed and the same conclusion reached at many conventions but that the conclusion had not usually put into actual practice because the men who attended the conventions had not carried the information to the department heads in their own organizations.

In answer to the question "Can packing materials be standardized sufficiently so that cooperative buying of supplies can be undertaken?", it developed that the majority of the members considered this a question to be taken up with the various local associations, pointing out that co-operative buying was being successfully handled by the local associations in New York and California. F. L. Bateman suggested that a complete list of market prices be published in current issues of the association's monthly magazine, for the guidance of members in making purchases.

Discussing "What inducement can be offered to employes to interest them in reducing the number of claims for damage and shortage?", R. O. Jackson, Shellhouse Fireproof Warehouse Co., Indianapolis, said his company set aside \$60 the first of each month from which all damage claims are deducted during the month. The balance left at the end of the month is divided equally among the employes. There are twelve men or this work and if they are successful in getting through the month without any damage they receive a bonus of \$5 each. Mr. Jackson declared the men had been much more careful since this system was put into operation.

In his report as chairman of the committee on membership, J. H. Troyer, Chicago, disclosed a satisfactory increase in membership since the Mackinac Island convention. At Mackinac the membership reached a total of 276. At the meeting here the membership had grown to a total of 417, with nine new applications on hand. It was voted to suspend the initiation fee till July 1. 1921, for all members accepted prior to that date.

WAREHOUSES IN KANSAS CITY WELL OCCUPIED

Sluggish Merchandising Is Reducing Volume of Outgoing Shipments—Several New Firms

KANSAS CITY, MO., Dec. 17-Sluggish merchandising, by both retailers and jobbers, has caused a reduction in the volume of outgoing shipments from Kansas City warehouses, and a slight falling off in poor car distribution. The incoming shipments from manufacturers continue apparently without abatementwith the result that available space is pretty well occupied. Relief for congestion that might be expected under such circumstances is found in the increased space now being put into use by two established warehouse firms, the Central Storage Co. and the Adams Transfer and Storage Co. A third factor is the building of a new merchandise warehouse, by a firm now getting into the business, the Evans-Smith company. Other smaller buildings have been completed, and are soon to be turned to warehouse purposes. Half a dozen distributors, among them a company operating many retail stores, are erecting buildings for their use, or equipping old buildings for storage. Within the past two weeks one local retailer, a piano dealer, has begun use of a new warehouse for his stocks.

Predictions made by pessimists that many buildings would be vacant by December 1 have not been fulfilled. Except for the completion of arrangements begun several months ago, there is no more building space available in Kansas City now than in the summer. And there are no indications that space will be more plentiful by Spring, except in buildings already under contract for erection. Building operations are already showing signs of opening; contractors are buying materials, and making plans for beginning erection of structures that have been "on the books" for several months. The completion of these projects will put into operation industrial and commercial enterprises that will further expand the distributive volume of the territory.

The fact that storage commodities continue to arrive here is fulfilment of the prophecy made several months ago by Kansas City warehousemen. They then, when business was beginning to falter, predicted that manufacturers would take advantage of the facilities of the warehouses, to offset the decreased direct shipment to retail trade, and to accumulate here stocks to care for demand when it revived.

And the reviving seems close at hand. Since the first of December definite indications have been noted of larger retail trade, and of easier money conditions. The most conservative bankers and business men expect to see a steady improvement in retail and jobbing movement, and about a normal volume by March or April.

Central Co.'s New Building

KANSAS CITY, MO., Dec. 1—The Central Storage Co. to-day took passession of the five-story building formerly used by the Missouri Seed Co., adjoining the storage company's St. Louis Avenue property. This additional structure was purchased when the warehouse company expanded several months ago. The seed building has trackage and docks. These docks will be covered and sprinklered, and will be operated as a separate unit. It greatly increases the company's facilities for handling distribution car business, and teaming and delivery service will now be improved.

"Cooney" Instead of "Auto"

TOCOMA, WASH., Dec. 16—Cooney Transfer & Storage Co. is the new name selected for the Auto Delivery Co. The firm has moved into a new four-story home at 2311 Jefferson avenue, where it has 40,000 square feet of fireproof storage room. Warehouse is equipped with car trackage and modern equipment for handling carload lots, both merchandise and household goods. E. C. Cooney is president,

42 Cents per Letter

H ERE is something which cost accounting has proven to one of the biggest warehouse companies in the country: that it costs from sixteen to forty-two cents in the various departments to dictate, write and mail a letter, the cost including ink, paper, envelope, postage and time.

Also that the average cost for making out a bill of lading is sixteen cents.

"Know your business!"

Columbus Company Expands

COLUMBUS, O., Dec. 4-The Merchandise Storage Co., through William E. Hague, president, and Charles F. Cohagan, secretary-treasurer, has secured a 99-year lease on a large warehouse at 96-108 West Maple Street, formerly owned by the Kiser & Hoe Co., merchandise brokers. The structure is of steel and concrete and has a frontage of 100 feet and a depth of 100 feet, backing up along the Hocking Valley Railroad tracks. It has two stores and basement, which will give large additional space to the warehouse company, which operates a warehouse at 27 to 39 West Vine Street. The company acquired in addition to the building the storage business of the Kiser & Hoe Co., but the latter retains its brokerage business. The valuation of the property is approximately \$100,000.

Warehouse for Charlotte

CHARLOTTE, N. C., Dec. 2—Charlotte is to have a new distribution warehouse. Harry A. Franklin, merchandise and commission broker, announces that one will be constructed on South Third street at the Seaboard Air Line tracks.

used by the Missouri Seed Co., adjoining the storage company's St. Louis Avenue ON STRAWBERRY STORAGE

WASHINGTON, Dec. 6—The Department of Commerce to-day made a public report on "Effect of Cold Storage on Strawberries" received from Robert P. Skinner, United States Consul General at Lendon. Mr. Skinner's report reads:

"The food investigation board organized under the British Department of Scientific and Industrial Research has carried out a number of interesting experiments in London with strawberries, for which purpose the Port of London Authority set aside special chambers suitably fitted up. As a result of these experiments it has been found that strawberries, when picked ripe, may be held in cold storage (temperature 1° to 2° C.) in a good marketable condition for six to seven days. Unripe strawberries do not ripen normally in cold storage, neither do they ripen when transferred to normal temperatures after a period of cold storage.

"The employment of certain artificial atmospheres in the storage chambers has been found greatly to extend the storage life of strawberries. For example, strawberries when picked ripe can be kept in excellent condition for the market for three to four weeks at 1° to 2° C. if maintained (1) in an atmosphere of oxygen, soda lime being used to absorb the carbon dioxide given off in respiration; or (2) in an atmosphere containing reduced amounts of oxygen and moderate amounts of carbon dioxide obtained by keeping the berries in a specially designed closed vessel. Under both these conditions of storage, the growth of parascitic and saprophytic fungi is markedly inhibited, but in each case the calyces of the berries lose their green color after two weeks.

"A method of obtaining strawberries as a dried fruit has been worked out and has yielded good results. The product, which has the appearance of a small reddish fig and the consistency of raisins or sultanas, retains the strawberry flavor and differs from a fresh strawberry in the same sense as the raisin differs from the grape.

"The product keeps well, is not attacked by molds, and is one-quarter to one-fifth the weight of the fresh fruit.

"Experiments have been conducted with frozen strawberries, and the results have shown that, with a considerable difference between varieties, strawberries held in a frozen condition for several months appear to be quite suitable for jam making. The acidity increases in the frozen fruit, and from the point of view of jam making this is an advantage."

Wool for Boston Warehouses

BOSTON, Dec. 17—With Boston's warehouses already jammed, provisions will have to be made to store wool coming here.

One million pounds of wool and mohair of the 1920 Spring clip has been consigned to Boston buyers by the West Texas Wool and Mohair Association. It is the first shipment of wool and mohair that has been made from West Texas since last Spring.

R. C. GRISWOLD ELECTED PRESIDENT OF I. A. of W.

Committees on Business Promotion and Cost Finding Appointed at Chicago Meeting

CHICAGO, Dec. 21-The Illinois Association of Warehousemen held a dinner and its final meeting of the year to-night at the University Club and elected the following officers for 1922:

Roy C. Griswold, president; J. E. Lee, vice-president; Elmer Erickson, secretary; Harry Crooks, treasurer; directors, Roy C. Griswold, J. E. Lee, G. M. McConnell, Harry Crooks, S. H. Verrall, A. H. Millward, Stephen C. Tooker, Jr.

A report of the American Warehousemen's Association convention at White Sulphur Springs was made by Mr. Griswold, whom the A. W. A. elected as a director. Favorable comment was made on the selection of central western men among officers and directors of the A. W. A. and predictions were made that western men would as a result take greater interest in the activities of the national body.

At the meeting to-night a definite program was outlined for extending the Illinois association's membership. A special membership committee will be appointed to carry on an active campaign. Other important committees appointed are a business promotion committee, whose duty will be actively to solicit new accounts for the Chicago territory and to create additional business for the warehousemen: legislative committee, to study especially the Public Utilities act and to influence as far as possible just treatment for the warehousemen from the Public Utilities Commission; a rate committee, having a subsidiary committee on cost accounting, to recommend to the association the best means of obtaining the essential data from which to prepare correct rates on handling and stor-

It was definitely decided to set aside the second Tuesday in each month as a

regular date for meeting.

An invitation was given to each member to attend the San Antonio convention of the Central Warehousemen's Club January 18, 19 and 20. Sidney A. Smith was appointed a committee of one on arrangements to secure accommodations for the Chicago warehousemen who will leave on a special car on the evening of the 15th of January.

Willis D. Leet, Chicago business representative of Distribution & Warehousing. was elected a member to-night.

Buffalo Storagemen Optimistic

BUFFALO, N. Y., Dec. 21-Warehouse and haulage experts in this city are very optimistic over the business outlook. The depression has been severe and in some scattered instances small businesses have been forced to the wall. One of the factors which has made the reaction from the rush of last Spring less severe here than in some places was the fact that, during the war and post-war periods, the employers were able to cope with the

labor situation. While it is understood that in some cities van men and extra workers received as high as eighty-five cents an hour, perhaps even higher, there is no record of any one in Buffalo paying more than sixty cents an hour and some of the leaders in the business never paid more than fifty cents. There has been a slight reduction in wages of that class, most of those workers now getting forty cents an hour. There may be a slightly further reduction.

WHAT'S WHAT IN NEW BUILDINGS

United Fire Proof Warehouse Co.

(Concluded from page 35)

est rate of insurance. The warehouse is equipped with one large freight elevator for handling of furniture and a passenger elevator for exclusive use by patrons.

West half of first floor is devoted to offices, vaults, piano room and rug room, balance to receiving of furniture preparatory for storage on upper floors or for shipment. The piano room is well heated and ventilated. Rug room was designed and constructed so as to meet every known requirement for preservation of rugs, carpets, draperies and linens.

Basement is devoted to the heating plant and a large, well-lighted and wellventilated packing and crating room. In the latter compartment are maintained electrically-driven saws for expediting preparation of furniture for shipments. customers being charged on a time and materials basis. Part of the basement is devoted to fireproof compartments for supplies and equipment, as large supplies must necessarily be kept on hand, such as paper, burlap, excelsior, pads, cotton batting, twine, nails, etc.

The warehouse possesses also specially constructed vaults for storage of trunks

and chests.

Second floor is devoted to private rooms and compartments entirely, for storage of furniture or of records for banks and business houses. An automatic self-operating elevator is maintained exclusively for patrons.

Third, fourth, fifth and sixth floors are for what is commonly known as open

storage of furniture.

Architects are Martin Tullgren & Sons, Milwaukee.

Ohio Haulers Meet

COLUMBUS, O., Dec. 21-The December meeting of the newly organized Columbus Association of Commercial Haulers was well attended, notwithstanding it was the Christmas season. Steps were taken to start a membership campaign soon after the first of the year. H. S. Woodward, of the Ohio Inspection Bureau, talked of insurance. The next meeting will be held January 4.

STUDY COST ACCOUNTING

Know Your Business!

HOLIDAY STORAGE SLUMP THROUGH CENTRAL OHIO

COLUMBUS, O., Dec. 23-The transfer and storage business in Columbus and Central Ohio was active up to December 15, when the usual seasonal slump took place. This falling-off in volume was expected because the holiday business of merchants and shippers who are unable to devote their attention to accumulating stocks. Another cause was that merchants generally are reducing stocks and are not buying as actively as formerly. This is causing a reduction in storage merchandise and as a result there is some vacant space in Columbus

The principal business at the present time is in food stuffs, including sugar, flour, beans, cereals, coffee and canned goods. Stocks of sugar and flour are fairly large, while there has been a general reduction in stocks of canned goods and cereals. Warehousemen anticipate a more active business starting with March and have made preparations ac-

cordingly.

The household goods transfer and storage business also shows a slump as a result of few removals. Space in the various storage houses devoted to household goods is not as fully occupied as formerly. Moving into the city has apparently stopped temporarily and some families are moving out. This is attrib-uted largely to the present unsettled industrial conditions.

In machinery and implement lines this is the dull season, although some activity is reported. Agricultural implements especially are not moving to any great

extent.

Generally speaking the business does not show any more slump than usual at this time in comparison with pre-war times. Transfer and storage men are generally optimistic and it is believed business will come along all right after the season of readjustment following the holidays.

The arrival of winter and cold weather has had its effect on long-distance hauling and this has fallen off materially, as was anticipated. But the winter months are being used to organize the inter-city transport service for the opening of the Spring.

Canal Warehouse Completed

BUFFALO, N. Y., Dec. 23-No. 1 warehouse of the New York State Barge canal at the Erie Basin has been completed and will be ready in every detail to handle canal, lake and rail business in large or small lots when navigation opens in the spring. This structure is fireproof and strictly modern in construction. It is 450 feet long and 90 feet wide.

Because of the generous side track equipment, it offers an opportunity for the big distributors to handle freight easily by rail as well as by water at the Buffalo terminal.

At the same time, lake steamers with cargoes from upper lake points can tie up alongside for transfer of cargo to canal boat or warehouse.

NEW QUINCY GUIDE IS BASED ON 100 POUNDS

Shipper, Knowing Cwt. Rate, Can Add Warehouse Tariff and Reckon on Distributing Costs

BOSTON, Dec. 17—A new tariff guide, with 100 pounds as the basis, has been issued by the Quincy Market Cold Storage & Warehouse Co. for the information and benefit of shippers.

A tariff distributed last year has the package as its basis. The new guide does not take the place of the old one but is supplementary to it. It does not apply to goods which customarily take a com-

modity rate.

The new guide of the Quincy Market Cold Storage & Warehouse Co. of Boston was explained at the annual convention of the American Chain of Warehouses, at White Sulphur Spring on Dec. 7, by Anson M. Titus, a cost finding expert with the Quincy company.

Mr. Titus explained that nine times out of ten shippers are ignorant of the specifications of their packages as relating to size, weight and dimension generally. The new tariff, he said, would enable the shipper to tell immediately the Quincy's rate per 100 pounds on his goods, and subsequently the Quincy could figure

out on a package basis.

The Quincy may decide to work out a conversion table giving both the 100-pound and package basis, showing equivalents, Mr. Titus added. He said that the value of having a conversion table would be that the shipper would have the advantage of adopting either method he preferred, using the 100-pound basis if he was ignorant of the specifications of his products.

"This is another way of getting things in order to meet conditions as they are when we solicit business," Mr. Titus said. "The shipper knows his freight rate on 100 pounds and he can now get his warehouse rate on 100 pounds and

add the two together."

Receiver's Sale for Eastern

BOSTON, Dec. 17—By order of the United States District Court a receivers' sale of the Eastern Cold Storage Co.'s plant at 28-32 North street will be held at public auction on Jan. 5. This property consists of a six-story brick building, with four stores, and 7,325 feet of land. The structure is equipped with boilers, engines, steam and ammonia pipe lines, motors, machinery, artesian well, elevators, etc. The sale includes a valuable lease on the adjoining building, 38-44 North Street, which has seven years to run.

Kansas City Warehousemen Reducing Labor

KANSAS CITY, MO., Dec. 18—Among the Kansas City warehouse and transfer companies a sharp reduction in the demand for common labor is noted, and many firms are discharging drivers. They are retaining, both in warehouses and on vehicles, the desireable men, pay-

ing them even though there is not enough work to keep them all busy, in order to maintain the men who best fit into their organizations. With some factories closed in Kansas City, several thousand local workers are idle, and young men of promise who are out of employment are being "lined up" now, and the personnel of the warehouse and transfer firms will doubtless be built with excelent material as need for more help develops.

New Truck Routes

BELLE PLAINE, IA., Dec. 10—The Marshall Truckportation Co., with offices in Marshalltown, will establish a freight terminal in this city and will operate three routes from here. Cedar Rapids, Grinnell, Marshalltown and Keystone are connected by branches of the truck line.

A. W. A. Membership Notes

PITTSBURGH, Dec. 15—The following membership changes in the American Warehousemen's Association are announced by Charles L. Criss, general secretary.

New member: Frank Fehr Cold Storage Co., Louisville, Ky. Affiliating with cold storage sub-division. Company formerly engaged in brewing industry. Officers include Harry M. Brennan, president; John R. Schoedell, secretary; Harvey Zwicker, general manager.

Resignations: Entrepot Central Warehouse Co., Montreal, from merchandise sub-division; Gunn, Langlois & Co., Ltd., Montreal, from cold storage sub-division; San Francisco Storage Co., San Francisco, from merchandise and household goods sub-divisions; Montana Transfer Co., Butte, Mont, from merchandise and household goods sub-divisions; John J. Woodside Storage Co., Atlanta, from household goods sub-division; Andrews Fireproof Storage Co., Cleveland, from household goods sub-division.

Transferals: Spokane Transfer & Storage Co., Spokane, and Holman Transfer Co., Portland, Ore., from household goods to merchandise sub-division.

Adams Co. Has More Space

KANSAS CITY, MO, Dec. 13—The Adams Transfer & Storage Co. is rapidly making available the additional space of its new building for its merchandise warehousing. The company is adding a story to its old structure, but the chief extra space is being obtained by the construction of a new unit, practically the same size as the enlarged old unit. Several floors of the new unit are now available; and new accounts waiting accommodation are, therefore, being taken care of.

Grocery Co. Enters Warehousing

BOSTON, Dec. 4—The Progress Wholesale Grocery Co. of Boston has been licensed to be a public warehouseman within and for the city of Boston.

EVANS-SMITH COMPANY ENTERS WAREHOUSING

KANSAS CITY, MO., Dec. 18-A new merchandise warehousing project will be put into operation early in the new year, with building now being erected, and equipment being installed, especially utilizing the most modern ideas in this industry. The firm entering public ware-housing is the Evans-Smith Drug Co., for many years a distributor of drugs, drug sundries, cigars, paint and kindred commodities. The company has sold its drug jobbing business and stock, and has cleared out its cigar, paint and other stocks. Its headquarters will be a fourstory building now about completed, on the Southwest Boulevard, with 60,000 square feet. Another building, one story, is completed, adjoining the large warehouses, which is equipped with tanks, and facilities for handling tank cars; here oils, chemicals and alcohol will be stored.

The Evans-Smith company will distribute only to manufacturers, and will be entirely out of the jobbing trade so far as the products it handles on a sales basis are concerned. Two of the products on which it will specialize are linseed oil

and alcohol.

The complete details of plans for operating are not available, but the purpose as already announced is to conduct a merchandise warehouse business for specialties of the classes indicated. The buildings, outside the present warehouse district, are adjacent to the main tracks of the terminal company, a few blocks from the Union Station; the Southwest Boulevard is a main traffic thoroughfare, by which access can be had to all parts of the city without heavy grades.

WAREHOUSEMEN TO TELL SHIPPERS ABOUT SERVICE

KANSAS CITY, MO., Dec. 15—The Kansas City Association of Warehousemen has set a new task for itself—development of a program for the information of shipper and customer on the value of the service rendered them.

"We have been carefully informing the customer of the many charges we make against him," said W. A. Sammis, secretary and manager of the Central Storage Co. "Possibly it looks to him as though we had worked overtime trying to find how many different charges we could make. Now we are going to show him how many different ways we now serve him, and can serve him."

This purpose was developed as a result of conversation between Mr. Sammis and L. T. Crutcher on their way home from the White Sulphur Springs Convention; and developments along this line in Kansas City can, therefore, be directly credited to the convention itself—and to the fact that more than one representative of the industry from this city attended. Mr. Sammis said they picked up several ideas which will be presented to the Central Warehousemen's Club and passed along to the local members of the association.

INDIANA WAREHOUSEMEN JOIN HAULERS' ASS'N

Convention Prepares State Legislative Program Relating to Motor Truck Fees

INDIANAPOLIS, Nov. 27—The Indiana Transfer & Warehousemen's Association at its third annual meeting voted to-day to affiliate with the National Association of Commercial Haulers. C. R. Collins, of California, secretary-manager of the National, outlined the work being done by 100,000 truck operators in raising the standard of that industry and declared the National would be able to assist the Indiana body in its legislative activities.

The convention to-day agreed that the type of highways now being built "would not meet the present industrial demands upon them and that the roads being built was a waste of public funds." The very late graveling of highways this year was declared "unwise and dangerous" on the ground that if November 1 had brought a general freeze-up many highways would have been almost impossible.

Tom Snyder, secretary, outlining the plans of the Indiana Highway Transport and Terminal Association, said:

"This motor truck terminal will be a clearing house at which all freight for highway transport will be brought or listed. Motor truck operators living within trucking distance of Indianapolis and agreeing to make regular scheduled trips to the city will be provided with return loads.

"All shippers and receivers within trucking distance will be solicited and told the advantage of the motor truck for the short haul. The cost of sustaining the terminal will be met by a clearing house or terminal fee.

"The capacity of the first building erected will be 100 tons per day, and from shippers' records this amount of commercial freight will be offered to us for transportation."

The legislative committee will work to the following ends:

That motor trucks in the State be registered with the Secretary of State at registraion fee of \$7.

That all motor trucks using the highways pay a road maintenance tax of \$5 per ton truck capacity, all trailers using the highways to pay a maintenance tax of \$2.50 per ton trailer capacity.

That cartage trucks and trailers used only on city streets not be required to pay road maintenance taxes.

A bill setting for these provisions will be introduced in the State General Assembly in 1921.

Expansion of Cost Finding

NEW YORK, Dec. 9—The research department of the National Association of Cost Accountants is concluding an intensive study of uniform cost accounting and expects to issue shortly a list of the cost finding systems of about sixty trade associations, this document to include brief summaries of some of the more important features.

The announcement issued by Stuart C.

McLeod, secretary, 233 Broadway, states that "we believe that there is a strong trend in American industry in the direction of uniform cost methods and it looks as though the next few years would witness a rather rapid expansion of this movement" but that "there are still many business firms and associations who have not a clear idea of the real function of a cost system and the results which may be secured from such a system."

New Incorporation

Vera Cruz Investment Co., Augusta, Me. Capital stock, all common, \$400,000. General warehousing, trading and manufacturing. President, E. M. Leavitt. Directors, E. M. Leavitt, L. E. Haskell, E. L. McLean, S. L. Fogg, D. A. Leland, E. M. Hill, M. Y. Marston.

MAMMOTH COLD STORAGE PLANT IN NEW HAMPSHIRE

PORTSMOUTH, N. H., Dec. 7—The first in what is hoped may become a chain of cold storage plants in New Hampshire, sufficient in capacity to handle hundreds of thousands of bushels of potatoes, millions of dozens of eggs, thousands of barrels of apples; in fact all of the surplus agricultural products of Rockingham and Stratford counties, with room enough left to meet the needs of the farmers and fishermen across the Piscataqua River in Maine for a large territory, will be ready for business within a month or two.

The work of transforming the great plant once occupied by the Portsmouth Brewing Company into a cold storage establishment is well toward completion and the coming crop season is expected to contribute toward filling the storage rooms of the establishment.

The Portsmouth Chamber of Commerce has given its approval to the local establishment as an industry, which means much in the rehabilitation of the port through the building up of a big business in frozen fish.

Municipal Warehouse Planned

TAMPA, FLA., Dec. 3—Tampa is going into the warehouse business. A storage structure seventy-five feet wide, built so that it may be enlarged later, is part of the plan of the municipal plans to improve the port.

Warehouse Encyclopedia

NEW YORK, Dec. 13—Preparation of an encyclopedia of warehousing has been put under way by H. I. Jacobson, manager of the Port of New York Warehousemen's Bureau of Information. In this volume, to be issued periodically as sections are completed, will be described proper storage methods in relation to commodities. The co-operation of all other warehousing associations is solicited. Mr. Jacobson, who is an expert in warehouse accounting and costs, is organizing H. I. Jacobson & Co., which will enter the business of introducing cost account systems into storage plants.

N. Y. GOVERNOR FAVORS WAREHOUSE EXPANSION

ALBANY, N. Y., Dec. 12—Alfred E. Smith, who on January 1 will retire as Governor of New York, announced here to-night that he will associate himself with the United States Trucking Corporation as chairman of its board of directors.

The United States Trucking Corporation was organized last January through amalgamation of seventy-five per cent of the trucking interests of New York City, the object being to expedite delivery and forwarding of goods through elimination of duplication of effort and through establishment of depots and return loads bureaus. Transfer and warehousing interests are identified with the corporation. In announcing his acceptance of the position of chairman Gov. Smith said in part:

"There is still a large field ahead for developing the trucking business up to the standards of other well organized lines of industry. It is these constructive possibilities that particularly interest me. Additional warehouse facilities must provided; constructive measures should be taken toward further reducing traffic congestion on marginal streets and on crosstown routes; there must be further development of port facilities; means must be devised for handling all freight moving through New York City with greater expedition and ease and at a rate that will tend to promote the commercial supremacy of the port of New York. I should like to help in solving these problems and I believe that I can do my part most effectively through my connection with the United States Trucking Corporation."

To Consider Receipts Act

PHOENIX, ARIZ., Dec. 1—Two laws of interest to warehousemen and shippers may be enacted at the next session of the State Legislature.

One is the uniform warehouse receipts act, which is in effect in all but a few States. The other is the uniform bills of lading act under which the shipper's would be more carefully guarded.

Philadelphia Needs Warehouses

WASHINGTON, D. C., Dec. 13—Additional warehouse facilities for Philadelphia, to prevent the tie-up of freight cars and vessels in trans-shipment of merchandise to tidewater were urged by John Meigs at the National Rivers and Harbers Congress dinner here.

bors Congress dinner here.

Mr. Meigs, president of the American Society of Terminal Engineers, said there was unreasonable delay in releasing cars in Philadelphia because of the lack of storage facilities.

New Milwaukee Co.

MILWAUKEE, WIS., Dec. 2—The Milwaukee Fireproof Storage Co. has been organized here with \$10,000 capital to erect and maintain a modern storage plant.

THE SILVER LINING

FUNDAMENTALLY, business conditions to-day are sound. This talk of business depression is largely psychological. Forget it! You're not acting pessimistically—why talk in other than optimistic terms? The jinx, if one exists, can be dispelled through cheerfulness. The New Year is the dawn of bigger and better business if you make it so. You can if you will. Let's talk sunshine!

Talking sunshine is what the Hyatt Roller Bearing Co. is doing to all business correspondents on its mailing list. Here is the text of the Hyatt message of busi-

ness cheerfulness:

JUST as surely as there is a silver lining to every rain cloud—just so surely is there a silver lining to the cloud of business depression now hovering over us.

"The rain cloud's silver lining is the good old sunshine—powerful, unchanging, shining brightly.

"The depression cloud's silver lining is the fundamentally sound condition of our great country—its limitless resources, its progressiveness, its men of brains.

"As manufacturers of the necessities and comforts of life we have a definite, important, useful place in the development of our country and just beyond the present there's a real, lasting demand for our products.

"Let us make our products better than ever before; let us sell them on a broader scale; let us get down to intensive, intelligent hard work with full faith that better business is within our grasp if we will make the effort.

"Let us as American Manufacturers find the silver lining now!"

LET'S FIND IT!

Boston Cold Storage Warehouses Are Heavily Stocked

BOSTON, Dec. 1—Cold storage houses in Boston have enough foodstuffs on hand to supply the populace of the entire commonwealth with enough food for a month, according to cold storage figures made public by Herman C. Lythgoe, chief of the division of food and drugs in the State Department of Health.

If a demand were made, the warehouses could supply each person with 2½ dozen eggs, 6½ pounds of meat, 5 pounds of fish, 4¾ pounds of butter and a half pound of poultry, said Mr. Lyth-

goe.

The total amount of butter on hand in storage Nov. 1, 1920, was 19,174,779 pounds, as compared with 16,525,092 for 1919, and 16,375,372 for 1918. The 1920

figures are the highest on record, the previous maximum of 1917 being 18,951,492. Eggs on hand in storage Nov. 1, 1920, were 9,786,960 dozen, as compared with 11,880,750 in 1919 and 13,047,600 in 1918. This indicates a falling off in the amount of eggs on hand and probably accounts for the high price prevailing now.

The amount of meat and fish stored during the month of October, with one exception, shows a reduction compared with the same month in 1919 and 1918.

Oklahoma City Fire

OKLAHOMA CITY, OKLA., Dec. 1—Loss from the recent fire in the plant of the Merchants Southwest Transfer & Storage Co., at 1 East Grand Avenue, is believed to be not more than \$15,000 or \$20,000. The blaze was confined to a front compartment on the third floor, furniture and canned goods suffering chiefly. The building itself was only slightly damaged.

SAVING \$9,000 YEARLY THROUGH COST FINDING

(Concluded from page 19)

increase in quoted rates is set, as a minimum on assorting, three to five assortments to a car coming under this provision. Maximum assortment, six or more assortments to a car, bring a 50 per cent increase in quotations.

The fourth labor item has to do with individual package delivery; a specified package, called for by number or otherwise, brings 100 per cent increase

in quotations.

"The expense of making this investigation, and disclosing the losses, was practically nothing," said Mr. Carroll. "A few tickets were printed; a few minutes a day were spent on the work by two or three people. And we spent some odd moments in studying the tickets. The expense and trouble have been repaid many times over."

The longest stretch of time consumed in the whole process was devoted to arranging the new contract for transfer, and preparing the new rate sheet and order blank.

All the data and experience are available to the other warehousemen in Kansas City.

"We are glad to pass along to anybody who can use it, the results of our

studies," said Mr. Carroll.

The other warehousemen are appreciative of the courtesy; and are using the data.

Virginia for Good Roads

RICHMOND, VA., Dec. 11—Plans are being made by the automobile dealers' associations and the Virginia Good Roads Association to ask the next General Assembly for a \$40,000,000 bond issue for good roads. At the general election an amendment to the constitution of the state was ratified by the people at the polls so that bonds could be issued.

MR. SHIPPER: JOIN

THE value of the Shippers' Warehousing and Distributing Association to traffic managers who distribute through warehouses is illustrated by a Bulletin which John Simon, its president, has sent to the Association's members. Several traffic managers receiving this Bulletin have informed the organization's secretary that this one Bulletin alone has more than saved them the amount of one year's dues, \$25. Mr. Simon's Bulletin, relating to taxes on shippers doing business through warehouses, reads in full:

"One of the largest harvesting machine companies of the United States has been barred forever from doing business through warehouses in certain States for the reason that it did not comply with certain laws in those States.

"Your Association desires to caution its members in respect to doing business through warehouses within any State in the Union.

"The proper procedure is to get in touch with the Secretary of State, at the State Capitol, as soon as you desire to carry a stock of goods in a warehouse or warehouses within any State. Ask him for blanks and literature covering foreign corporations and tell him briefly your plan to carry stocks in warehouses at certain points within the State.

"Most States assess a tax each year for the privilege of doing business through warehouses within the State and also charge an entrance fee. In most cases this charge is nominal, however, and it is far better to comply with the law and pay the tax than it is to subject yourself to a severe fine and the possibility of being barred, as the case in point first mentioned.

"It is hoped this information will be of value to you."

Mr. Shipper—you who carry warehouse stocks—it will pay you to join the Shippers' Warehousing and Distributing Association. Send your application for membership—NOW—to John Simon, Manager, Transfer Department, Keystone Steel & Wire Co., Peoria, Ill.; or C. P. Thomson (chairman, membership committee), Traffic Manager, Furniture Manufacturers' Association, Grand Rapids, Mich.

SOUTHERN WAREHOUSES SUFFER FIRE DAMAGE

ATLANTA, GA., Dec. 28—It is doubtful if any month has ever before witnessed as many warehouse fires in the Southeast as the month of December, when hundreds of thousands of dollars worth of property was destroyed in Tennessee, Georgia and North and South Carolina.

The most serious blaze was that which destroyed the salesrooms and warehouse of the Glidden Co., of Cleveland, at Memphis, Tenn., on Dec. 26, causing a loss estimated at about \$250,000.

A few days before Christmas the reserve warehouse of the American Railway Express Company in Macon, Georgia, was destroyed, together with several adjoining buildings. The loss was about \$100,000.

Loss of about \$50,000 was caused by a fire in Atlanta which destroyed the garrage building of the Morrow Transfer & Storage Co. Thirty trucks stored in the building were either destroyed or seriously damaged. The origin of the blaze could not be determined.

Earlier in the month a fire destroyed the warehouse of the Farmers' Marketing Association at Orangeburg, S. C., causing a loss of about \$100,000. About 1,000 bales of cotton were consumed. It was suspected the blame may have been of incendiary origin, as there have been several cotton warehouse fires in the Southeast within the past two months, many of which are believed to have been incendiary and the work of "night rider" gangs in their nefarious effort to bring about higher cotton prices through a reign of destruction.

Another fire, thought to have been of incendiary origin, destroyed the Farmers' Warehouse at Reidsville, N. C., December 20, causing a loss of about

Loss of about \$15,000 was caused by a fire at Athens, Ga., which partially destroyed the cotton warehouse of Barrett & Co.

In addition to the above fires there were several other warehouse blazes in the Southeast during December, mainly cotton warehouses, though losses were not as large as in the fires mentioned.

Rochester's Canal Traffic

ROCHESTER, N. Y., Dec. 18.—A total of 85,920,000 pounds, or 42,960 tons, of freight have been cleared from the Rochester harbor of the Barge canal this year. It is said by canal authorities that while a substantial amount of freight was shipped out of the harbor this year, the first time it has been in operation, the amount is insignificant compared with the tonnage the harbor can handle after it is fully equipped.

can handle after it is fully equipped.

With the completion of the approach to the warehouse and the construction of adequate storage facilities and cranes for removing merchandise, it is believed that the business of the canal will be greatly increased. It is estimated it will cost the state about \$20,000,000 more to

put the canal in efficient shape, while many tugs will be required so as to provide more rapid towing facilities.

It is explained that rapid packet service will be installed after the terminals of the canal are completed. It is planned to triple the warehouse in Rochester and to provide cranes that will unload barges quickly. It is the opinion of the state representatives that after the canal is really completed a large volume of business will be handled out of Rochester.

RIVERS CONGRESS URGES BUILDING OF TERMINALS

WASHINGTON, D. C., Dec. 10—The following is one section of the "policies, purposes and desires" of the National Rivers and Harbors Congress as adopted at the sixteenth annual meeting of the Congress here to-day:

Production, Distribution and Terminals-The ever-increasing productiveness of the country necessitates an increase in its transportation facilities-railway, waterway and highway-which must be co-ordinated. Therefore, terminals, including physical connections between these transportation facilities, must be provided by states and localities, as required by the Federal Government. Cooperation is urged between the United States Engineers and local authorities in planning of such terminals, so that harbor lines as established and facilities provided by the Federal Government and by local authorities shall be fully co-ordinated."

Alluding to construction and use of waterways the declaration by the Congress reads:

"We urged upon Congress the adoption, with as little delay as possible, of a plan for the entire country of a comprehensive system of waterways, connected wherever practicable, and in the formulation of such plan military needs should be carefully considered. Such plan, when adopted, should be pushed to early completion, first attention to be given to the main rivers and canals which may be regarded as trunk-line channels of a general National system of water highways, the work on these main lines to be prosecuted as rapidly as possible so as to permit their prompt use.

"We call the earnest attention of the people of the country to the fact that navigable waterways are intended primarily for commerce, and the expenditure of public moneys for their improvement can only be justified when they are to be used for this purpose. We again urge the use of the waterways to the fullest possible extent."

Conditions at Montreal

MONTREAL, Dec. 27.—Storage space for commercial goods is in great demand here owing to the fact that manufacturers have no place to house their overstocks.

Long distance haulage by motor truck has been suspended because of snow conditions in this section.

PRITCHARD CO. TO BUILD GREAT NEW WAREHOUSE

ROCHESTER, N. Y., Dec. 14.—The construction of a large storage warehouse is planned by the Pritchard Storage & Warehouse Co., whose property at Main street east and Circle street adjoins the main line of the New York Central Railroad at the entrance to its eastern freight yards. The officers say it will be one of the largest single units for storage in the United States.

The company has been unable to supply the demand for car-lot storage, owing to the city's growth in manufacturing and other commercial industries. The new warehouse will add to the company's present capacity a six-story concrete building of sufficient size to aggregate as a whole eight and one-half acres of floor space, or approximately 4,000,000 cubic feet of storage.

This will accommodate 3,000 carloads, or thirty freight trains of 100 cars each. It will have three large elevators capable of accommodating a five-ton truck load of merchandise, which may be transported to any floor and driven to its location on that floor. It will be automatically sprinkled and steam-heated throughout.

It is likely, according to the officers, that a cold-storage department for the accommodation of the fruit and vegetable owners of this section will be added.

Plans for the new six-story structure are in the hands of an architect.

Canadian's New Members

VANCOUVER, B. C., Dec. 24.—The Canadian Storage and Transfermen's Association has taken into membership the Safety Storage & Warehousing Co., Ltd., Victoria, and Leslie's, Winnipeg, it is announced by E. A. Quigley, secretary.

New Lackawanna Manager

SCRANTON, PA., Dec. 27—The Lackawanna Cold Storage Co. announces that George A. Cosgrove has succeeded Benjamin S. Wilson as the company's general manager.

Texas Would Build Warehouses

DALLAS, TEX., Dec. 17-Fifty Texas Legislators assembled here to-day at the invitation of D. E. Lyday, State Commissioner of Markets and Warehouses, to hear his explanation of a bill under which would be created a State warehouse system supervised by a State board of warehouse commissioners. If the legislation proposed is enacted, all Texas warehouses, for agricultural products, whether State or privately owned, would come under the control of the board. The State would obtain finances for erecting new warehouses by levying a tax of fifty cents on each bale of cotton ginned in Texas, and, when no cotton was available for storage in such plants, other agricultural products would be admitted on permission by the various warehouse

WAREHOUSING NEWS

What's going on in your town?

The industry wants to know!

INCORPORATIONS

Reynolds-Whitney Warehouse Co., New York City. Active capital, \$5,000. Incorporators, W. D. Bresler, F. D. Yuengling and R. Whitney.

Lee & Simmons, New York City. Active capital, \$5,000. Wharfage and storage. Incorporators, M. Roger, R. J. Sykes, W. H. Gillon.

Nineteenth Street Storage Warehouse, Brooklyn. Capitalization, \$20,000. Incorporators, E. T. Cassidy, M. A. Cassidy and J. E. Cassidy.

Washington Shipping Co., New York City. To engage in warehousing. Capitalization, \$5,000. Incorporators, G. M. Cayanaugh, F. P. Donnelly, G. Suss.

Cavanaugh, F. P. Donnelly, G. Suss.

Vernon Warehouse Co., Vernon, Tex.
Capital stock, \$18,000. Incorporators,
Lon Byars, A. M. Bourland and T. H.
Shive.

Cotton Warehouses, Inc., Wilmington, Del. Capital, \$800,000. Incorporators, T. L. Croteau, M. A. Bruce, S. E. Dill.

Prudential Storage & Moving Co., Los Angeles. Capital stock, \$75,000. Directors, C. B. Blackmore, Edgar Castang and Burt Edwards.

Triangle Haulage Corp., Buffalo. Capitalization, \$5,000. Incorporators, T. H. Grabbenstaetter, A. J. Schmitz, G. H. Waykley.

Apex Warehouse Co., Toledo, O. Authorized capital, \$10,000. Incorporators, W. S. Young, G. B. Blizard, G. R. Forrester, P. T. Gayner, A. L. Mayer.

Heights Storage & Cartage Co., Shaker Heights, Ohio. Capitalization, \$10,000. General storage and transfer business. Incorporators, W. E. Brill, C. Dehn, L. H. Frye, W. A. Williams, H. Jones.

NEW BUILDINGS, ETC.

Great Northern Warehouse Co., St. Paul, has leased basement and second and third floors of Willys-Overland Building on University Avenue. Space will be used for storing automobiles from both manufacturers and individuals.

Delta Warehouse Co., Stockton, N. Y., has been granted right to sell one share of its capital stock at par, \$100, for cash to each of its seven incorporators, and to issue 1550 shares in exchange for certain real property. Company plans to engage in general warehousing and grain business.

Liberty Storage & Warehouse Co., New York City, has increased its capitalization from \$75,000 to \$325,000.

Reynolds-Whitney Warehouse Co., New York City, has leased for twentyone years 7- and 8-story buildings of Beadleston & Woerz Empire Brewery property at 158 to 166 Charles Street and has taken opinion on other property of brewery company, at 674-676 Washington Street and 287 to 303 West 10th Street.

Brighton Transfer Co., Cincinnati, has increased its capital from \$10,000 to \$200,000

N. J. ASSN.'S ANNUAL MEETING ON JANUARY 19

NEWARK, N. J., Dec. 28—The annual meeting and banquet of the New Jersey Furniture Warehousemen's Association will be held on January 19 at Newark, business session starting at 3 p. m. and the dinner at 7:30 p. m. Guests are expected from New York, Chicago, Pittsburgh, Boston, Baltimore and Philadelphia, with a probable total attendance of at least 125. Frank J. Summers, secretary, is chairman of the committee.

At the association's December meeting the committee on laws and legislation reported defeat of a removal ordinance which the city of Paterson had purposed. The association had opposed the ordinance and its legal committee was instrumental in its defeat.

Condition of business among the members was reported as follows: storage at a standstill, moving very slow, packing quiet, collections fair to good.

The Charles T. Wales Storage Warehouse, New Brunswick, was elected to membership.

Ohio Haulers Organizing

COLUMBUS, O, Dec. 20—The Ohio Association of Commercial Haulers, organized recently with William H. Kutschbach of Columbus, president, and E. A. Mallory of Toledo, secretary, has started on its campaign to organize local associations in the various cities.

A number of the officials headed by Secretary Mallory and Charles C. O'Brien of Cleveland, vice-president, have been canvassing the State to make a survey of conditions. As a result of the campaign a meeting of transfer men and haulers will be held at Cincinnati January 13 for organization purposes. Later meetings will be held at Springfield, East Liverpool, Steubenville and other cities for organization purposes.

One of the plans of organization of the State Association is to have a vicepresident in each of the twenty-two Congressional districts in the State. It is also planned to organize these districts for the purpose of co-operation.

District No. 16, taking in Canton, Massillon and Alliance, was recently formed, with twenty-six members. G. L. Tudor is district secretary.

CENTRAL CONVENTION PROGRAM ANNOUNCED

After Adjournment, Delegates Will Journey to Mexico as Guests of Texas Warehousemen

SAN ANTONIO, TEX., Dec. 15—A program for the annual convention of the Central Warehousemen's Club to be held at the St. Anthony Hotel here on Jan. 18, 19 and 20 was announced to-day following receipt of information from George A. Hamley, Minneapolis, secretary of the association. A feature of the entertainment which the Texas Warehousemen and Transfermen's Association has arranged for the delegates will be a journey across the international line into Mexico. The program arranged jointly by Mr. Hamley and W. I. Ford of Dallas, secretary of the Texas organization, is as follows:

Jan. 18: report of president, W.
L. Hinds, Des Moines; report of
secretary and treasurer, George A.
Hamley, Minneapolis; review of
Base Rate Storage Table, Mr.
Hamley; "Broader Fields in Warehousing," W. I. Ford, Dallas, and
Sidney A. Smith, Chicago; "Central Warehousemen's Club and Its
Possibilities," L. T. Crutcher, Kansas City; "Cost Finding," Mr.
Hamley and W. W. Morse, Minneapolis; "The Conscientious
Warehouseman," T. J. Skellet,
Minneapolis; "Labor," P. J. Mills,
Des Moines.

Jan. 19: report of committee on Household Base Rate Table, John Bekins, Omaha; "Warehouse Construction and Costs," S. C. Blackburn, Kansas City; "Ideas—Big and Little," Heber Page, Dallas.

and Little," Heber Page, Dalias.
Jan. 20: "Household Goods
Cartage—Its Problems and Its
Profits," C. C. Williams, San Antonio; report of committee on
Cartage Base Rate Table, John
Bekins, Omaha; unfinished and
new business, election of officers
and directors.

A special luncheon for the women guests will be held on Jan. 18. On the afternoon of January 19 there will be a sight-seeing trip to historical points of interest in San Antonio; and in the evening a Mexican supper will be given, with music, a cabaret, and an address by Harry M. Wuzbach, Republican Representative-elect from San Antonio, on "What It Means to be a Republican in the South." On the night of Jan. 20 the delegates will be guests of the Texas association on a trip to Laredo, where they will arrive on the morning of the 21st; they will inspect Laredo and Nuevo Laredo, Mexico, being the guests of the Mexican Government at the latter point.



"A Full House"

VERY cubic foot of space here is put to the most profitable use. None is wasted. The unwieldy bales of paper scrap go towering high overhead to heights no human hands can reach unaided.

Up to the very ceiling they go straight up. "Stepping" them has been proved a wasteful practice, for now a few men can pile the bales where once a whole crew needed room to stand.

The Economy Portable Elevator, in its various sizes and capacities, is helping to fill warehouses and storage rooms full in more than a hundred different lines of industry.

Whether the material is in bales, bags, boxes, barrels, crates or any other form, the Economy System makes full houses a simple matter. Free booklet, "Economy in Storage," gives more particulars. Address Chicago office.

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ECONOMY ENGINEERING COMPANY

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How much space are YOU wasting?

ECONOMY PORTABLE ELEVATORS and STORAGE RACKS



A Truck Worth Insuring Is Worth Insuring Well

Your motor equipment represents a considerable investment. You ought to take every precaution to keep it adequately insured. No doubt you do. But in placing insurance have you considered these essential points?

Does the company in which you are insured have sufficient financial strength?

Has it a reputation for prompt and liberal settlements?

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A North America Automobile Policy

without costing any more than ordinary insurance assures you of all these things and guarantees maximum safety with the broadest possible protection.

A North America automobile policy covers Fire, Theft, Collision and Property Damage. Its thousands of agencies throughout the United States assure speedy settlement of all claims and prompt repairing of damaged trucks.

Any agent or broker can get you a North America policy

Insurance Company of North America Philadelphia

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Founded 1792

Writers of Fire, Marine, Baggage, Parcel Post, etc.

Fill out and mail this coupon and we will send you data

ARANT PAR	INSURANCE COMPANY OF NORTH AMERICA 232 Walnut St., Philadelphia		Fire
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	Name		Collision
	Address Number of Trucks		Property Damage

PACKARD



A Saving of \$3,206 in a Year

To haul the most goods in the least time at the lowest tonmile cost is one of the axioms of success in the field of distribution and warehousing.

How well the Packard truck meets these conditions is eloquently evidenced by the record of a Packard ED owned by the Raritan Transfer Company, of Raritan, N. J.

In a year of hauling, this truck

effected a saving of \$3,206.14. It was on the road 304 out of the 365 days. It covered approximately 14,700 miles at a repair cost of but 1 6-10 cents per mile.

The known ability of Packard trucks to maintain records like this in every line of industry is a direct result of correct design, painstaking manufacture, and scientific specification to the job.

PACKARD MOTOR CAR COMPANY · DETROIT

Ask the man who owns one

JANUARY

The Month For Making Plans

Right now scores of warehousemen are considering what they must do to make this year's business more profitable and successful than the one just closed.

The big problem confronting most of them is whether they shall build additional facilities or not; and, if so, WHEN—this Spring, or later.

What Are You Going to Do?

Perhaps you have not decided yet, because you are uncertain about building costs, availability of materials, possibility of financing, and a 1000 and 1 other points, too numerous to mention.

You undoubtedly know that Moores & Dunford are gathering, from all parts of the country constantly, information that will assist you in solving these questions.

They believe it to be as important to be able to give you the "dope" on these matters as it is to know how to design your warehouse right and see that it is constructed as it should be.

Here, then, is a suggestion

If proof of the fact that a warehouse can be built the early part of this year mighty near as cheaply as it could FOUR years ago —

IF SUCH PROOF WILL AID YOU IN ARRIVING AT A DECISION ON WHAT YOU ARE GOING TO DO, WRITE US FOR THE COLD FIGURES. FIGURES TALK.



Moores & Dunford Engineering Corporation

Specialists in warehouse design and maintenance and supervision of warehouse construction

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Shippers' Index

A Guide to representative Merchandise, Cold Storage and Household Goods Warehouses, Forwarders, Terminals, and Transfer Companies, arranged by States and Towns

To Shippers—A Means

Because it contains the announcements of representative warehouse, terminal, forwarding and transfer companies and because these announcements are conveniently arranged according to the location of the companies, the Shippers' Index on the following pages is regularly employed by national distributors and shippers of all kinds as a means for finding reliable consignees and competent concerns to handle storage, distribution and re-shipments.

To Warehousemen—An Opportunity

Because those who use it as a means for finding the kind of concerns with which they prefer to do business are among the country's largest shippers, the Shippers' Index offers to warehousemen, forwarders, terminals and transfer companies an opportunity to place their special facilities before those who can use them to the greatest advantage to both parties concerned.

CONVENTION CALENDAR

January	13	. Toronto Cartage & Warehousemen's Association Toronto
44	17	. New York Furniture Warehousemen's Asssociation New York City
44	18-20	. Central Warehousemen's Club
44	19	. New Jersey Furniture Warehousemen's AssociationNewark
February	у	. Montana Transfer and Storagemen's Association Great Falls
66		. Pacific Coast Furniture Warehousemen's Association San Diego
March 23	1	. National Association of Commercial Haulers Milwaukee
June		. National Furniture Warehousemen's Association(To be decided)
"		. National Team and Motor Truck Owners' Association Detroit
"		New York State Cold Storage Association(To be decided)
July		.Shippers' Warehousing and Distributing Association (To be decided)
December	r	American Chain of Warehouses(To be decided)
44		American Warehousemen's Association(To be decided)
(Date no	ot fixed)	Southern Furniture Warehousemen's AssociationMemphis

MOBILE, ALA.

Acme Transfer and Storage Co. 209-211 N. Royal St. Distribution

Transfer Pool Cars

"Service"

Forwarding Storage

Household Goods Mobile, Ala.

LITTLE ROCK, ARK.

WAREHOUSING AND FORWARDING

Distributors of Pool Cars, Parcel Post Catalogs and Merchandise

TERMINAL TER

109-111 RECTOR AVENUE

All track connection

BIRMINGHAM, ALA.

HARRIS TRANSFER AND WAREHOUSE COMPANY

(Equipped to Handle Anything)

MODERN FIREPROOF WAREHOUSE

Special Attention Given to Packing and Shipping

When shipping to Birmingham, consign goods to Harris
—he will look after your interests, also those
of your customer

Offices: CHAMBER OF COMMERCE BLDG.

TEXARKANA, TEX.

HUNTER TRANSFER CO.

TEXARKANA, TEXAS

STORAGE DISTRIBUTORS TRUCKING MOVING

BERKELEY, CAL. T



STUDENTS

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NOGALES, ARIZONA

The West Coast Warehouse Co., Inc.

Nogales, Arizona

The Key to the West Coast of Mexico For Manufacturers, Packers, &c.

Reference: First Nat'l Bank. Assets over \$50,000.00 Siding S. P.

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Only Re-inforced Concrete Warehouse for Storage and Carload Distributing Throughout the Whole Imperial Valley.

Daily Truck Service to All Valley Towns.

Our Stock in Trade, SERVICE.

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Pool-Car Distributing a Specialty

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Long Beach, Cal.

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15,000 Square Feet Floor Space COMMERCIAL STORAGE

52,000 Square Feet Floor Space

Southern Pac. and Pac. Elec. R. R. Spur Tracks Equipped to handle anything in warehousing or transfer

The Men Who Distribute

Weed Chains

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The Men Who Distribute

Dr. Miles Medicines

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

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Fidelity Fireproof Storage

1836 Arapahoe Street, Los Angeles, Cal.

Intelligent and forceful supervision of all business intrusted to us.

We have a seven-story reinforced concrete warehouse.

We consolidate and solicit distribution of consolidated cars of household goods.

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Shattuck & Nimmo

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Storage and Distribution

Of All Non-Perishable Commodities

All cars handled at our own plant. No switching charge if cars are consigned in our care.

Manufacturers and forwarders consolidating car loads for Pacific Coast distribution are assured of efficient service and prompt returns.

MEMBERS

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Lowest Insurance Safety Prompt Reports



Moderate Rates
Satisfactory Service
Car Load Distribution

The location of the above pictured building, one of our four warehouses in Los Angeles, is in the Wholesale Terminal, the largest plant of its kind in the world, where practically all the wholesale business of the city is conducted. A similar building is now under construction to be completed about March 1st, 1921. We are now accepting applications for space in same.

If you are contemplating using warehouse space on the Pacific coast or are dissatisfied with your present service, write for our rates on your requirements. Our service is guaranteed.

UNION TERMINAL WAREHOUSE CO.

OAKLAND, CAL.





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HASLETT WAREHOUSE CO., THE

228 Pine Street, San Francisco

Will handle your interests in the Far West with excellence of service that has grown from years of experience in California territory.

Some Haslett Helps For You

We will store or forward your merchandise.

We offer also U. S. Customs and Tea Bonded Storage. \ard storage provided. Public Weighers.

Warehouse receipts issued-collections made.

Pool car distributing and reforwarding a specialty.

Drier, cleaner and fumigator for beans, corn and other grains.

Light hauling, city deliveries and general truck service.

Handy location to retail districts and to freight stations. Low insurance rates,

Every form of time-saving equipment.

Any special service a client desires will be given personal and immediate attention.

Coffee hulling, conditioning and hand picking.

Track connections with all lines.

S. M. Haslett, President P. E. Haslett, Secretary

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Send Pool Car Shipments to Bekins.

Give your customers full measure of satisfaction by sending your California Pool Car Shipments to Bekins. Distribution attended to with promptness and dispatch.

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Distribute Thru San Francisco

Giving your customers the advantage of prompt delivery from local stock.

Our modern fireproof storage warehouses having spur track connections to all railroads are located in the wholesale district convenient to docks and railroads for reshipping. Our automobile truck delivery service insures prompt and efficient delivery of your merchandise.

We furnish whatever clerical service you de-

Let us handle your San Francisco shipments.

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Eclipse Lawn Mowers

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Transfer and storage of merchandise and household

Distribution of pool cars given special attention. Complete fleet of Motor Trucks in addition to wagon equipment. Every modern facility for handling heavy machinery, safes, boilers, smokestacks, etc.

Packing household goods and pianos and consolidating in car lots east or west at reduced rates a specialty.

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Distribution of Car Lots a Specialty

Every Facility for Handling Safes, Boilers and Heavy Machinery. Complete Fleet of Motor Trucks and Modern Equipment

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Packing, Crating and Shipping of
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Only Fireproof Storage Warehouse in Hartford

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Safe Mover-Freight and Baggage Transfer-STORAGE

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Special Facilities for Moving Heavy Machinery and Safes

Storage Warehouse for Merchandise

Separate Apartments for Furniture

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PROMPT REMITTANCES

Efficient and Courteous Service

MOTOR TRUCKS

PADDED VANS

Modern Fireproof Warehouse

JACKSONVILLE, FLA.

DELCHER BROS. STORAGE COMPANY

FIREPROOF WAREHOUSE

We Move, Pack, Store and Ship Furniture Consign Your Pool Cars to Us.

Motor Equipment

JACKSONVILLE, FLA.

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EAST UNION and IONIA STREETS

55 Rental Compartments

Track Capacity 52 Cars

Building of reinforced concrete with sprinkler system. Low Insurance Rate. Sub-Post Office and branch Western Union Telegraph. Joint Railroad Agent. L.C.L. freight loaded direct for line of road.

GENERAL MERCHANDISE STORAGE AND FORWARDING

Special attention to handling of pool cars.

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General Merchandise Storage and Distributing References:

Any bank, jobber or transportation man in the city

MIAMI, FLA.

The John E. Withers Transfer & Storage Co., Inc.

will give your shipments careful attention. Fireproof Warehouse. Facilities for distribution of pool cars. Moving, packing, shipping and storing Household Goods.

Private Trackage Motor Equipment Motor Equipment

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Receiving and Warehousing of General Merchandise in carloads or less than carloads.

Merchandise stocks carried and records kept for out-of-town

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Pool Cars a Specialty. Moving, Packing, Shipping and Storing Household Goods

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Moves, Stores, Packs, Ships Household Goods Exclusively THREE WAREHOUSES Office, 6-8 MADISON AVE.

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SALES & WAREHOUSE CO.
FIRE PROOF CONCRETE WAREHOUSE
MERCHANDISE DISTRIBUTORS
R. R. TRACKAGE, MOTOR SERVICE
Located in heart of wholesale district. Located in heart of wholesale district. 13 Produce Place

SAVANNAH, GA.

Savannah Bonded Warehouse and Transfer Co.

General Storage-Re-Consigning Distributing—Forwarding Prompt and Efficient Service **Exceptional Facilities** Custom House Brokers

Track Connections with all Railroads and
Steamship Docks
Members American Chain of Warehouses
embers American Warehousemen's Association

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Savannah, Ga.

BOISE, IDAHO

PEASLEY

TRANSFER & STORAGE COMPANY STORAGE, TRANSFER AND FORWARDING

NINTH AND GROVE STREETS

AURORA, ILL.

Thompson Transfer & Storage Co.

"We Deliver the Goods"

Consignments of household goods handled in a way to bring you credit. Drayage, storage, forwarding and distribution. The only building in Aurora designed for purely storage purposes,

Phones: Chicago 2666 and 291 12 N. RIVER ST., AURORA, ILL. Members: N. F. W. A. and I. F. W. A.

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HOUSEHOLD SHIPPING COMPANY

Reduced Rates on Household Goods, Automobiles and Machinery General Offices, 805 BEDFORD BLDG., Chicago

NEW YORK, BOSTON, BUFFALO, CINCINNATI

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General Merchandise Warehouses

Modern, Fireproof Buildings; Lowest Insurance Rates; Track Space for Sixty Cars.

Located on the Chicago Junction Railroad, which has direct connections with all trunk lines entering Chicago. Our switching service is unexcelled. A universal freight station in operation on our premises guarantees the most rapid handling of outgoing L. C. L. shipments.

CHICAGO, ILL.

Before you decide on your Chicago Warehousing connections, investigate the facilities and service

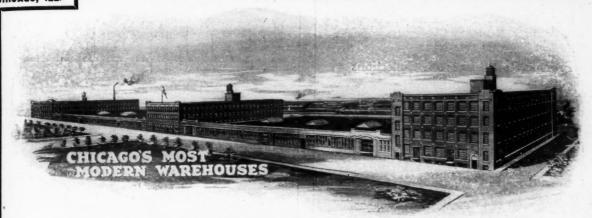
Continental Warehouse Co. 416-434 West 12th Place - Chicago

Sprinkled warehouses in the heart of the freight terminal district

The Men Who Distribute

Moline Plows

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index



Insure Prompt Deliveries

CARRY A STOCK NEAR YOUR TRADE

Our modern warehouses containing 350,000 square feet of floor space are completely equipped with Sprinkler System.

Ship direct to us and let us fill and reship your orders. L. C. L. shipments made without cartage expense.

INSURANCE RATES AS LOW AS 15C NEGOTIABLE RECEIPTS ISSUED

Take Advantage of the Rates in Transit

FLOOR SPACE WITH OFFICES TO RENT

BUILDINGS ERECTED TO SUIT TENANTS' REQUIREMENTS

Carload Shipments Made on Telegraphic Orders

CHICAGO STORAGE & TRANSFER CO.

5835 West 65th Street, Chicago, Ill.

CHICAGO, ILL.

Currier-Lee Warehouse Co.

427 West Erie St., Chicago, Ill.

MERCHANDISE STORAGE EXCLUSIVELY

MODERN BUILDINGS

CONVENIENT LOCATION

UP-TO-DATE METHODS

ADEQUATE FACILITIES

LOW INSURANCE RATES

EXPERIENCED EMPLOYEES

The Men Who Distribute

Colgate Laundry Soap

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Men Who Distribute

Gold Dust

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

CHICAGO, ILL.

EMPIRE STORAGE COMPANY

Fireproof Warehouses (Established 1891)



A Distinctive Organization

Our main consideration is the safeguarding of our correspondents' interests. The careful attention we give their commissions are borne of years of experience.

Remittances of charges advanced are made immediately upon receipt of bill of lading.

The most liberal treatment of customers' complaints has built for us an enviable reputation for fairness.



Close proximity to the Belt Line Switch Tracks promotes expeditious handling of shipments from all trunk lines.

EMPIRE STORAGE COMPANY

52ND ST. AND COTTAGE GROVE AVE.

MEMBER

National Furniture Warehouseman's Assn.

BANGOR, MAINE

GUY P. BAILEY

Storage Warehouse for Household Goods and Merchandise

Telephone Connection

75-85 French Street

Bangor, Maine

BALTIMORE, MD.

Leonidas Levering, Pres.

CENTRAL WAREHOUSE CO.

STORAGE—TRANSFER—SHIPPING

517-525 W. Baltimore St.

"DISTRIBUTING AGENTS"

Consign Your Pool-Cars Direct to Us. We Handle Everything

"EXPERT SERVICE"

"LOW FIRE INSURANCE"

BALTIMORE, MD.

Graham's Storage Warehouse

The Largest in Baltimore
Established 1887 GEO. D. MAGRUDER, Pres. and Gen'l Manager



800 Storage rooms, one to ten Van load capacity. Vans load and unload in the centre of the building.

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Send us your Baltimore Consignment

Members, N. Y. F. W. A. — I. F. W. A. — Baltimore, F. W. A.

BALTIMORE, MD.

Phone Gilmor 3000.

THOS. H. VICKERY, President.

BALTIMORE STORAGE & MOVING COMPANY

1710 to 1720 Edmondson Ave.

Members N. Y. F. W. A.

Fireproof W'h's'e in rear

ALTIMORE, MD.

THE KAUFMAN
Fire-proof Storage Warehouses



BALTIMORE, MD

Send your Baltimore shipments to
MONUMENTAL STORAGE COMPANY



BALTIMORE, MD. T

Security Storage & Trust Company

15 W. North Avenue

FIREPROOF WAREHOUSES
MOTOR EQUIPMENT

EFFICIENT SERVICE TO WAREHOUSEMEN

Members of

Baltimore Furniture Warehousemen's Association New York and Illinois Warehousemen's Associations National Furniture Warehousemen's Association

The Men Who Distribute

Quality Brands

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BOSTON, MASS.

ESTABLISHED 1880

T. G. Buckley Co.

Expert Packers and Movers of Household Goods

BOSTON'S OLD RELIABLE FIRM

Modern Concrete Warehouse for Household Goods.

"Every Room a Fireproof Unit." Our Own Rug Cleansing Plant.

We can handle your Boston Business Efficiently

OFFICE AND WAREHOUSE:

690 Dudley St.,

Boston

Members N. F. W. A.

LUSTON, MASS.

Northern Avenue Stores and Dock Corporation

New Haven Terminal Stores 308-316 Congress Street, Boston, Mass.

Direct Track Connection

New York, New Haven & Hartford Railroad

Dockage for Steamers and Vessels

Storage of Wool, Leather and General Merchandise

Fort Hill Storage Warehouse

415-429 Atlantic Avenue 76-86 Purchase Street

General Merchandise

George W. Blinn, Manager

BOSTON, MASS.

Quincy Market Cold Storage and Warehouse Co. STORAGE FOR FREE AND BONDED MERCHANDISE



Charles River Stores, 480,000 sq. ft. Fireproof construction— Lowest Insurance Rates. Direct track connection with the Boston & Maine R. R. Deep Water Connection—Dock 500 ft. long.

Albany Terminal Stores, 143,000 sq. ft. Fireproof construction—Lowest Insurance Rates. Direct track connection with the Boston & Albany R. R.

Constitution Stores, 60,000 sq. ft. Battery Wharf, 88,000 sq. ft. Wharfage and Storage. Connects with all railroads via Union Freight R. R.

GEORGE S. LOVEJOY, Manager, General Store Department.

Main Office: 178 Atlantic Ave., Boston, Mass.

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The John E. Withers Transfer & Storage Co., Inc.

will give your shipments careful attention. Fireproof Warehouse. Facilities for distribution of pool cars. Moving, packing, shipping and storing Household Goods.

Motor Equipment

Cor. Ave. C and 2nd St., Miami, Fla.

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Ferriss Warehouse & Storage Co.

HARRY P. FERR'SS, PRES.
Receiving and Warehousing of General Merchandise in carloads or less than carloads.

Merchandise stocks carried and records kept for out-of-town

Cor. Chase & Alcinez Streets

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Hallmark Transfer Co. GENERAL STORAGE

Pool Cars a Specialty. Moving, Packing, Shipping and Storing Household Goods

132-134 East Chase Street, Pensacola, Fla.

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VAN & STORAGE COMPANY

Moves, Stores, Packs, Ships Household Goods Exclusively THREE WAREHOUSES Office, 6-8 MADISON AVE.

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Transfer & Storage Company HOUSEHOLD GOODS and COMMERCIAL

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FIRE PROOF CONCRETE WAREHOUSE
MERCHANDISE DISTRIBUTORS R. R. TRACKAGE, MOTOR SERVICE Located in heart of wholesale district. 13 Produce Place

SAVANNAH, GA.

Savannah Bonded Warehouse and Transfer Co.

General Storage-Re-Consigning Distributing—Forwarding
Prompt and Efficient Service **Exceptional Facilities** Custom House Brokers

Track Connections with all Railroads and Steamship Docks

Members American Chain of Warehouses Members American Warehousemen's Association

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PEASLEY

TRANSFER & STORAGE COMPANY STORAGE, TRANSFER AND FORWARDING

NINTH AND GROVE STREETS

AURORA, ILL.

Thompson Transfer & Storage Co.

"We Deliver the Goods"

Consignments of household goods handled in a way to bring you credit.

Drayage, storage, forwarding and distribution. The only building in Aurora designed for purely storage purposes.

Phones: Chicago 2666 and 291

12 N. RIVER ST., AURORA, ILL.

Members: N. F. W. A. and I. F. W. A.

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BEKINS

HOUSEHOLD SHIPPING COMPANY

Reduced Rates on Household Goods, Automobiles and Machinery

General Offices, 805 BEDFORD BLDG., Chicago NEW YORK, BOSTON, BUFFALO, CINCINNATI

CHICAGO, ILL.

CENTRAL

Storage & Forwarding Company

39th & Robey Streets

General Merchandise Warehouses

Modern, Fireproof Buildings; Lowest Insurance Rates; Track Space for Sixty Cars.

Located on the Chicago Junction Railroad, which has direct connections with all trunk lines entering Chicago. Our switching service is unexcelled. A universal freight station in operation on our premises guarantees the most rapid handling of outgoing L. C. L. shipments.

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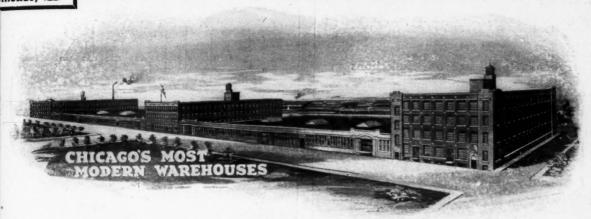
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The Men Who Distribute

Moline Plows

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CARRY A STOCK NEAR YOUR TRADE

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EMPIRE STORAGE COMPANY

Fireproof Warehouses (Established 1891)



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52ND ST. AND COTTAGE GROVE AVE.

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National Furniture Warehouseman's Assn.

Center of Great West Side OUR SPECIALTY

Prompt Remittances on Collections

Fireproof



Non-Fireproof

MOVING

PACKING

SHIPPING

Master Service at Your Service

3111-17 W. Madison Street

MEMBERS OF ILLINOIS AND NATIONAL FURNITURE WAREHOUSEMEN'S ASSOCIATIONS.

CHICAGO, ILL. [

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Storage Warehouses



All collections on shipments made to us promptly

Member of

National Furniture Warehousemen's Association, Illinois, New

York and Southern Warehousemen's Association.

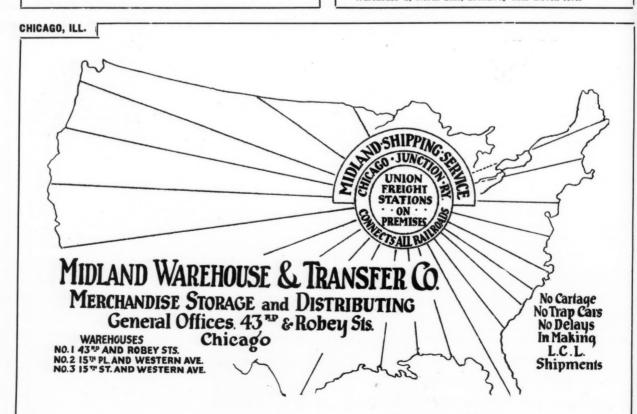
Our Seventh Warehouse

on 6331-33 Broadway, near Devon Avenue, which will handle all Rogers Park or North Shore shipments.

Warehouses A-B-C-D, West Side, Ogden and Winchester Aves.

Warehouses E-F, North Side, Sheridan Road and Sheffield Ave.

Warehouse G, North Side, Broadway near Devon Ave.



Storage-Packing and Shipping-Motor Van Service

North Shore Fireproof Storage Co.

4820-4822 Broadway—4821-4829 Broadway 1330-1332 Morse Ave. (Rogers Park) CHICAGO

Members Illinois and National Furniture Warehousemen's Association

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Very Low Insurance Rates CM&STP Ry. Track Inside Buildings

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Ontario & Kingsbury Streets,

FROSTPROOF MERCHANDISE STORAGE

We specialize in the handling of Foodstuffs—our location being very convenient for distribution to wholesale grocers and jobbers.

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Railway Terminal & Warehouse Company
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Merchandise Storage

Located in the heart of the wholesale district. Especially convenient for the warehousing of spot stocks for distribution among the wholesale

Side track facilities with free switching from all railroads entering Chicago.

Modern Building—Low Insurance Rates

Use Our Service

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Moving, Packing, Shipping, Storage of Household Goods and Merchandise.

Prompt, Efficient Service. We Use Packard Vans.

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1854 N. Halsted St., Chicago, Ill.



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RESHIPPING WAREHOUSES

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L. C. L. without cartage

Daily Trap Cars

H. P. 3109-Midway 4940

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Derricks

Space

Trackage

Automobiles

Trackage

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Steel and

Heavy Products.

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No congestion. Modern Facilities. All within the Chicago Switching District. Milling in Transit Privileges. Write or wire—F. W. Hagen & Co., 1131 East 77th St., Chicago, Ill.

P. A. HALLBERG, Manager

CHICAGO, ILL.

Soo Terminal Warehouse

Chicago, Illinois

Storage and Distribution of Merchandise Centrally

Located

Make Your Out-of-Town Shipments Without Cartage Via Chicago Tunnel. Absolutely Fireproof

"The Economical Way"

W. L. Morgan, Manager

519 W. Roosevelt Road

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To insure quick delivery and lowest handling expense consign all Chicago Shipments to Tooker Storage & Forwarding Co., 14th St. Erie R. R. Terminal; New York Shipments to Tooker Storage & Forwarding Co., 28th St. Erie R. R. Terminal.

TOOKER STORAGE & FORWARDING CO.

MERCHANDISE WAREHOUSEMEN

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Chicago Office:
and
Warehouse:
Clark & 14th Sts.
Erie R. R. Tracks
Tel. Victory 2360-2429

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CHICAGO

We Store and Distribute Merchandise Only

CHICAGO, ILL.

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ROBERT L. SPENCER Warehouse Superintendent

WESTERN WAREHOUSING CO.

General Merchandise Warehouses

POLK STREET TERMINAL, PENNSYLVANIA SYSTEM, CHICAGO

WHERE WE ARE:

At the edge of "The Loop," Chicago's downtown business center.

WHAT WE HAVE:

500,000 square feet of floor space. Track capacity, 60 cars daily. New concrete, fire-proof building. Insurance rate, 18.9c. per \$100 per annum.

Stocks carried for local and out-of-town concerns. Excellent facilities for prompt carload and L.C.L. reshipments. Negotiable receipts issued. Automobile storage and reshipment a specialty.

WHAT WE CHARGE:

Current Chicago rates, quoted on application.

WILSON V. LITTLE, Agent.



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Fire-proof Storage

Freight Distributors for Moline, Rock Island and Davenport

Send your freight to us to Moline, as we get Illinois freight rates at a saving of 31/2c. to 4c. per hundred from Chicago, Forwarding and reconsigning.

Crandall Transfer & Warehouse Co. 1205-1209 Fourth Avenue Moline, Ill.

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RALPH D. BAYNARD Traffic Manager

MERCHANTS WAREHOUSE COMPANY

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"The Choice of the Greatest Industries"

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BROWN TRUCKING COMPANY

MOVING, DISTRIBUTING, STORAGE AND GENERAL TRANSFER-MOTOR SERVICE

Pool Cars a Specialty

Office, 125 W. Columbia Street

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We'll Be Ready Early This Year

Just as soon as conditions permit, ground will be broken and building operations begun on the large modern warehouse. It will be the third of our buildings devoted to storage, warehousing and distribution of commodities.

Progress on the building and announcement of the opening will be made in this medium later.

FORT WAYNE STORAGE COMPANY Indiana

FORT WAYNE, IND.

Private Siding With All Railroads

Pettit's Storage Warehouse

FIRE PROOF BUILDING

ROOMS FOR HOUSEHOLD FURNITURE

General Merchandise Warehousing and Transferring Factory Distributors

INDIANAPOLIS, IND. |

We Have the Very Best of Equipment for Handling Heavy Machinery, Boilers, Engines, Tanks Vaults and Safes for Erecting Smoke Stacks



INVESTMENT \$200,000.00

We have just completed one of the most modern fire-proof warehouses in the country—centrally located on a privately owned railroad switch accommodating eight cars.

We are equipped to give the very best service in all kinds of moving and packing. All shipments consigned to our care will receive prompt attention and our twenty-five years' experience and reliability insures this service.

HOGAN TRANSFER & STORAGE CO.

Member N. F. W. A. and I. F. W. A.

Established

INDIANAPOLIS, IND. 1

INDIANAPOLIS WAREHOUSE CO.

Our Service consists of—Warehouse for Manufactured Articles, Trucks for Drayage Equipment. Prompt shipment, and reports as you want

for Drayage Equipment. Frompt supposent, and the them.

We are, in fact, ready to be **your** Shipping Department.
Located in the heart of the U.S. A., within 12 to 24 hours of your customers in Indiana, Ohio, Illinois, Kentucky and Michigan.
Insurance rate, 30c—extra hazardous goods not taken.
Six-story and basement, heavy mill construction, sprinkler equipped, A.D. T. Watchman Service. 150,000 square feet heated to 50°.

We solicit your business and refer you to any of our customers as to our ability to do it right.

Penna. Ry.; C. C. C. & St. L. Ry.; C. I. & W. Ry.; L. E. & W. Ry.; Ills. Central Ry.; C. I. & L. Ry.
18 Traction Freight Lines.

Indianapolis Warehouse Co., Inc.
FRANK A. TODD, V. P. and Gen'l Mgr.
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INDIANA INDIANAPOLIS

The Men Who Distribute

Bowser Tanks

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Merchandise Distribution General Storage

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Merchandise
Distribution and Warehousing
pecial attention given to the prompt and efficient handling of Pool Cars.
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H. A. PRUYNE, Manager.

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SOUTH BEND, IND.

BELL PHONE 774

Woodworth's Storage and Transfer Line

FREIGHT TRANSFER AND HEAVY MACHINERY
Furniture Moved in Vans and Stored in Fireproof or
Mill Constructed Bldgs.
OFFICE: REAR ROBERTSON HOTEL, EAST WAYNE STREET

Represented by J. P. WOODWORTH

South Bend, Ind.

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LOW FREIGHT RATES

To Us—From Us

The Mississippi marks the line between expensive The Mississippi marks the line between expensive shipments and economical redistribution. Carloads rehandled in Burlington take a low rate this far, and another low rate beyond. It is at this point that the C. B. & Q. break bulk on their westbound shipments. Through cars are made up daily for practically all points within a radius of 200 miles and all points of any consequence west.

Mercer Transfer and Storage Company Burlington, Iowa

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Carry Spot Stocks in Louisville

Where Concentrates the Golden Flood of Ohio River Valley Commerce

Louisville Public Warehouse Co.

Louisville, Kentucky W. N. Cox. President.

E. H. Bacon, Vice-President,

LOUISVILLE, KY.

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Moved, Packed, Stored, Forwarded AUTOMOBILE AND TRACTOR STORAGE Members I. F. W. A.

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PHONE 78

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P. O. BOX 593

NO TASK TOO GREAT—NO ITEM TOO SMALL SERVICE FIRST

Parsons Transfer and Storage Co.

1904 BROADWAY

KANSAS

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Palmolive Soap

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WICHITA, KANS.

A. F. JONES, President A. S. PARKS, Vice-President J. H. BRUCH, Sec'y and Gen'l Mgr.



WE OPERATE THREE OF THE FINEST FIREPROOF WAREHOUSES IN THE MIDDLE WEST



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Carnahan's Transfer & Storage

Alexandria.

La.

Merchandise and Furniture Storage Distributors and Forwarders.

Auto Truck Service

The Men Who Distribute

Spokane Paper Products

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The Men Who Distribute

Aunt Jemima Pancake Flour

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NEW ORLEANS, LA.

APPALACHIAN SERVICE



SPACE—STORAGE—DISTRIBUTION

and FORWARDING

To the WORLD'S COMMERCE

Through the

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STORAGE We own the Largest Modern Public and Government Bonded Warehouse in the South. Contains 7,500,000 cubic feet, equal to more than 14 acres of surface storage facilities, caring for 3,000 carloads of material at one time. Our sidings have a capacity of 24 cars. Direct connection with all railroad and steamship lines entering New Orleans.

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FOR SERVICE ADDRESS APPALACHIAN CORPORATION INC. OF LOUISIANA

-SPECIAL-

Our Negotiable Receipts are Current in all financial centers. When desired we assist. We also arrange Marine Insurance and Advances on Carload Shipments.

LOUIS B. MAGID, President

South Peters, Thalia, South Front and Erato Streets

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"The City of New Opportunities"

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Storage Warehouse for Household Goods and Merchandise

Telephone Connection

75-85 French Street

Bangor, Maine

BALTIMORE, MD.

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CENTRAL WAREHOUSE CO.

STORAGE—TRANSFER—SHIPPING

517-525 W. Baltimore St.

"DISTRIBUTING AGENTS"

Consign Your Pool-Cars Direct to Us. We Handle Everything

"EXPERT SERVICE"

"LOW FIRE INSURANCE"

BALTIMORE, MD.

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The Largest in Baltimore
Established 1887 GEO. D. MAGRUDER, Pres. and Gen'l Manager



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BALTIMORE, MD.

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THOS. H. VICKERY, President.

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Fireproof W'h's'e in rear

BALTIMORE, MD.

THE KAUFMAN Fire-proof Storage Warehouses



BALTIMORE, MD

Send your Baltimore shipments to MONUMENTAL STORAGE COMPANY



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Security Storage & Trust Company

15 W. North Avenue

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MOTOR EQUIPMENT

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Quality Brands

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921

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ESTABLISHED 1880

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Expert Packers and Movers of Household Goods

BOSTON'S OLD RELIABLE FIRM

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We can handle your Boston Business Efficiently

OFFICE AND WAREHOUSE:

690 Dudley St., Boston

Members N. F. W. A.

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Northern Avenue Stores and Dock Corporation

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GEORGE S. LOVEJOY, Manager, General Store Department. Main Office: 178 Atlantic Ave., Boston, Mass.

BOSTON, MASS.

H. H. WIGGIN, PRESIDENT

S. G. SPEAR, TREASURER

TERMINAL WHARF AND RAILROAD WAREHOUSE COMPANY

50 Terminal Street

Charlestown District, Boston



Storage of Wool, Cotton and General Merchandise

LOWEST INSURANCE RATES DIRECT TRACK CONNECTIONS BOSTON & MAINE R. R.

SHIPPING DIRECTIONS MYSTIC WHARF BOSTON, MASS.

Fumigation of Foreign Cotton and Cotton Waste

AND OTHER MATERIALS AS REQUIRED BY U. S. GOVERNMENT

CARTAGE TO AND FROM FREIGHT STATIONS AND BOAT LINES

WEIGHING, SAMPLING, AND ALL SERVICES USUALLY PERFORMED BY AN UP-TO-DATE WAREHOUSE

We will Lease or Build to Suit Tenants

BROCKTON, MASS.

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Reinforced Concrete Construction
Absolutely Fireproof
Private Rooms For
Household Goods, Pianos, Etc.
General Storage Warehouse
Merchandise—Distribution—Negotiable Receipts
Issued

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43 North Montello Street, Brockton, Mass.

HOLYOKE, MASS.

Sheldon Transfer & Storage Co., Inc.

ESTABLISHED 1870

Main Office 647 Main St.

Branch Office 47 Main St.

SPECIALISTS IN POOL CARS

Storage Space, 50,000 sq.ft. N.Y.N.H.& H.and B.& M.Sidings

The Men Who Distribute

De Laval Separators

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Men Who Distribute

Vacuum Oil

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

NEW BEDFORD, MASS.

NEW BEDFORD STORAGE WAREHOUSE CO.

Modern Sprinklered Warehouses, Approximately 400,000 sq. ft. Floor Space.

Low Insurance Rates

Excellent Rail and Water Connections

N. Y., N. H. & H. R. R. and New Bedford Line, from Pier 40, North River, New York. Daily sailings.

We operate a large, modern pier and storage shed on 25-ft. channel.

Distribution and Pool Car **Shipments Solicited**

1921

SPRINGFIELD, MASS.

Central Storage Warehouse

Incorporated
HAVE THE BEST OF EQUIPMENT FOR HANDLING ALL KINDS
OF SHIPMENTS

FIREPROOF FURNITURE STORAGE

Warehouse: 270 Liberty Street Office: 315 Bridge Street Springfield, Mass., U. S. A.

BATTLE CREEK, MICH.

Household Goods Warehouse

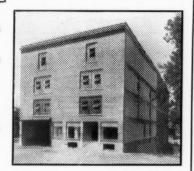
Pool Car Distribution of Merchandise.

Sales Rooms.

MOTOR TRUCK SERVICE

Emerson Storage & Sales Co.

21 Locust St., Battle Creek, Mich.



BAY CITY, MICH. The

RiversideTruck&StorageCo.

GENERAL MERCHANDISE DISTRIBUTION
Storage of Household Goods and Merchandise.
Car Load Lots and less than Car Load Lots. Private Railroad Track-Sidings on all railroads entering Bay City. Office & Warehouses: Cor. 2nd & Adams St., Bay City, Mich.

BAY CITY, MICH.

P. Van Haaren & Sons Storage Co. FIRE PROOF STORAGE

Steel Compartments for Furniture Storage GENERAL TRANSFER LINE MOTOR TRUCK SERVICE
BAY CITY, MICHIGAN

Est. 1880

The Men Who Distribute

Minute Tapioca

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Men Who Distribute

"None Such" Mince

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index.

The Men Who Distribute

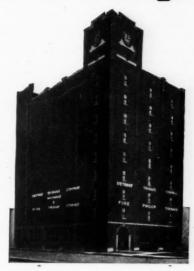
Ivory Soap

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

DETROIT, MICH.

DETROIT'S LEADING MOVERS.

Detroit Storage Co.



Main Office and Fireproof Warehouse

MOVING, PACKING, SHIPPING

MOTOR COUIPMENT

Corner East Grand Boulevard and Beaubien St., DETROIT, MICH.

DETROIT, MICH. [

Detroit, Michigan

GENERAL STORAGE AND DISTRIBUTING COMPANY

Main Offices

5680 FEDERAL AVENUE

Ship Us Your Carloads for Distribution Forwarding, Distributing and Reshipping Agents

CUSTOM HOUSE BROKERS EXPERT TRAFFIC SERVICE

50 Car Track Space on M. C. R. R. and Grand Trunk Motor Trucks 1 to 10 Ton Capacity

DETROIT, MICH.



STORAGE

We have every facility to handle your Detroit Shipment.

> Address Office: 526 Alfred St. Detroit, Mich.

DETROIT, MICH.

Michigan Warehouse Co.

COMMERCIAL WAREHOUSEMEN AND CARLOAD DISTRIBUTORS

Leslie R. Horn, Pres. and General Mgr. Office: 124 West Larned St., Detroit, Mich.

DETROIT, MICH.

Shekell Moving Van Company

Fireproof and Non-Fireproof Warehouses.

Merchandise Distribution and

Household Goods Storage.

24 Motor Trucks in Operation.

127-129 Grand River Ave. Detroit, Mich.

DETROIT, MICH.

THE ORIGINAL

Turner Cartage Company

EST. 1880

GENERAL WAREHOUSEMEN
MOVING—PACKING—SHIPPING
MOTOR TRUCKING—TEAMING
MACHINERY MOVERS—RIGGERS—ERECTORS

MAIN OFFICE: 334 Lafayette Blvd. Main 2660 Detroit, Mich. WAREHOUSES:
No. 1—334 Lafayette
No. 2—365 Howard
No. 3—MCRR & Beaubien St.

SHIPPING

FLINT, MICH.

ALLEN STORAGE CO.

HOUSEHOLD GOODS EXCLUSIVELY

MOTOR TRUCK SERVICE
STORAGE :-: PACKING :-:

Office: 615 E. Sixth Ave. Member A. W. A. FLINT, MICH.

GRAND RAPIDS, MICH.

Elston Packing & Storage Co.

Storage household goods and merchandise. Seven warehouses with over 200,000 sq. ft. of floor space.

Members of the Illinois Warehousemen's Assn., New York Warehousemen's Assn. and American Warehousemen's Assn.

GRAND RAPIDS, MICH.

The Men Who Distribute

Whittaker Paper Products

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

GRAND RAPIDS, MICH. [

Furniture Manufacturers Warehouse Company

GRAND RAPIDS, MICH.

Have you ever considered Grand Rapids as a distributing center for your product? If you have not we would like to direct your attention to this City as the logical distributing point for Michigan and surrounding territory.

Grand Rapids has five steam Railroads and two Electric Lines in addition to Motor Truck Service to a number of near-by towns, and we believe an investigation would prove that you might warehouse and distribute a considerable amount of business from this City.

This company will have completed and in operation, January 1, 1921, the most modern and up-to-date fire-proof warehouse in Michigan. We will have 100,000 square feet of floor space and the entire building equipped with Automatic Sprinklers, thereby guaranteeing our customers the lowest possible rate of insurance. We will also have every facility for handling a general merchandise storage business, including cartage and reshipping.

Our warehouse is located on two railroads. We have free switching from all lines and we are only four blocks from the business district of the City and two to eight blocks from all freight stations.

If you are interested in distributing your product in this territory we will be pleased to give you full information in regard to rates and service.

GRAND RAPIDS, MICH.

Kent Storage Company

69 to 69 Front Ave. Grand Rapids, Mich. Branch at Battle Creek, Mich.

General Merchandise Distribution.
300,000 Sq. Ft. Sprinkler Warehouses.
Free switching on all R.R.'s entering Grand Rapids.
Motor Truck Equipment.

COLD STORAGE PLANT

(Temp. Zero to 40°)

600,000 Cubic Ft. Cold Storage Space.

Member National League of Commission Merchants.

Law Tariffs, Schedule of Rates submitted upon application.

Michigan's Logical Distributing Point
Liberal advances.

Negotiable warehouse receipts issued.

GRAND RAPIDS, MICH.

Shank Fireproof Storage Company

Largest Fireproof Storage Warehouse in Western Michigan.

Merchandise and Household Goods.

Members I. F. W. A.

The Men Who Distribute

Tropical Paint

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

, 1921

HIGHLAND PARK, MICH.

MARVIN SPRAGUE

STORAGE and CARTAGE MOVING, PACKING and SHIPPING EXPRESSING

> OFFICE AND WAREHOUSE 2170 HAMILTON BLVD. HIGHLAND PARK, MICHIGAN

LANSING, MICH.

Fireproof

Storage & Transfer Company

Central Michigan Distributing point for pool car shipments. We have the only modern fireproof warehouse in the city for storage of Merchandise, Automobiles, H. H. Goods. Private siding on P. M. R. R. connecting with M. C., N. Y. C. & G. T. Railroads.

MOTOR TRUCK SERVICE

LANSING, MICH.

Lansing Storage Company

Exclusive Household Goods Storage Moving, Packing, Shipping Motor Van Service for Inter-city Work "We know how" 412 No. Washington Ave., Lansing, Mich.

JACKSON, MICH.

Jackson Storage & Trucking Co.

409 to 425 Liberty St., Jackson, Mich.

Separate Fireproof Locker Rooms. Motor Vans for City and Long
Distance Moving. Storage and Packing Household Goods. Warehouse Space and Office Rooms for Rent.

General Distribution and Storage of Merchandise
Railroad Sidings on all Roads Entering Jackson

SAGINAW, MICH.

CENTRAL WAREHOUSE CO.

GENERAL WAREHOUSEMEN AND FORWARDERS MERCHANDISE DISTRIBUTION

SPRINKLER SYSTEM
Private Sidings M. C. R. R.
SAGINAW, MICH. N. Michigan Ave.

JACKSON, MICH.

Shaw Storage & Transfer Co.

107 Michigan Ave., Jackson, Mich. H. A. SHAW, Proprietor

Prompt Service-Private Rooms-Popular Rates. MOTOR TRUCK SERVICE AUTO AND WAGON EXPRESS-PACKING-MOVING-STORAGE DULUTH, MINN.

SECURITY STORAGE & VAN CO., 14 EAST MICHIGAN ST.

STORAGE AND TRANSFER OF HOUSEHOLD GOODS AND MERCHANDISE

POOL CAR DISTRIBUTORS

Located on Terminal Tracks

No Switching Charge

MINNEAPOLIS, MINN.

OFFICERS

W. P. TRICKETT, PRESIDENT

T. J. SKELLET, VICE PREST. I. A. THORSON, SEC'Y & TREAS MINNEAPOLIS TERMINAL

WAREHOUSE COMPANY

DIRECTORS: SEWALL D. ANDREWS NORTON M. CROSS J. A. GRAHAM M. SCHIBSBY T. J. SKELLET I. A. THORSON W. P. TRICKETT



OUR RATES ON FILE WITH STATE OF MINNESOTA BY WHOM WE ARE LISCENSED UNDER \$ 50,000 BOND

Dear Mr. Distributor:

Uinneapolis,

November 1, 1920

In warehousing, as in every other line of business, efficiency lies in specialization. Efficient warehouse service is not a question of how high or low the cost, but how much you can save over your present cost of distribution. We are specializing in reforwarding service. Place your stocks, for distribution thruout the northwest, with us and insure prompt, efficient service at maximum saving in distribution cost. Our Traffic Department is in close touch with all matters pertaining to transportation thruout the northwest and will gladly co-operate with you in working out an efficient plan of distribution. Yours truly MINNEAPOLIS TERMINAL WAREHOUSE COMPANY

Manager

WJB L

MINNEAPOLIS, MINN.



The Largest Trade Territory West of the Mississippi

is served by nine Railroads, four of which are transcontinental, comprising 27,000 miles of track and covering 500,000 square miles in area. Minneapolis is the natural gateway to this territory and the largest city. The map shows the time required to make freight deliveries within this trade area from Minneapolis. The first day delivery serves 2,000,000 people, the second day delivery another 2,000,000, the third and fourth day deliveries each 1,000,000 people.

SECURITY WAREHOUSE COMPANY

Minneapolis, Minnesota.

Established 1883

921

MINNEAPOLIS, MINN.

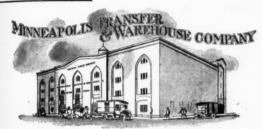
ALL RAILROADS LEAD TO BOTH OUR FIREPROOF AND NON-FIREPROOF WAREHOUSES DISTRIBUTING AND WAREHOUSING MERCHANDISE AND HOUSEHOLD GOODS TRUCK SERVICE Regular Trips Between Twin Cities

Cameron Transfer and Storage Co.

Main Office. 420 Second Avenue South

Warehouses: 734 to 758 North Fourth Street

MINNEAPOLIS, MINN.



Locked Private Fireproot Rooms for Storage of Household Goods. Lowest Insurance Rate in Minneapolis.

MOVING-PACKING-SHIPPING

POOL CAR DISTRIBUTORS
Complete Fleet of Auto and Horse Vans

MINNEAPOLIS, MINN.

Skellet Company

1,000,000 cubic feet

Fireproof Storage Merchandise and Household

We issue our own insurance, authorized by State Insurance Commission

Bonded to the State of Minnesota for \$50,000

ST. PAUL, MINN.

St. Paul

Minn.



Distributors and Handlers of

HOUSEHOLD GOODS

The Men Who Distribute

Climalene

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

ST. PAUL, MINN.

The Central Warehouse Co.

Minnesota Transfer, Minn.

Merchandise, Bonded and Cold Storage Industrial Sites

At the junction of nine railroads, midway between the Twin Cities. L. C. L. shipping without carting. Motor trucks for local deliveries. 40 acres of ground. Six miles of trackage operated by our electric locomotives.

ST. PAUL, MINN.

Kedney Warehouse Co.

Commercial Storage and Forwarding

St. Paul Warehouse 9th and Broadway

Minneapolis Warehouse, 8 to 22 Hennepin Ave.

Private sidings and free switch connections with all roads

Our own motor trucks operating in and between both cities.

ST. PAUL, MINN.

St. Paul

Terminal Warehouse Co.

Eighth, Ninth, Locust and Willius Streets St. Paul

Fireproof buildings of newest construction, equipped and organized to give warehouse service. Served by all railroads entering the Twin Cities. Merchandise exclusively.

> DISTRIBUTION-STORAGE-SPACE RENTALS

Automatic insurance placed on receipt of your goods, if desired.

The Men Who Distribute

Jiffy Desserts

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Men Who Distribute

Swedish Separators

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

DO YOU KNOW

Kansas City is the second
largest railroad center in
the United States?



COLUMBRICA DANS TRANSFER

ADAMS TRANSFER and STORAGE COMPANY

General Merchandise Storage and Cartage

BROKER'S OFFICE and WAREHOUSE COMPANY

General Merchandise Storage

L. T. CRUTCHER WAREHOUSE COMPANY

General Merchandise and Implement Storage EMPIRE STORAGE and ICE COMPANY

Cold Storage and Merchandise

D.A.MORR TRANSFER and STORAGE COMPANY

General Merchandise and Household Goods

SOUTHWEST WAREHOUSE CORPORATION

General Merchandise Storage

CENTRAL STORAGE COMPANY

Formerly-CLAGETT STORAGE & TRANSFER & ON NEWBY TRANSFER & STORAGE & GONEGA STORAGE & STORAGE & STORAGE & STORAGE & STORAGE & STORAGE KANSAS CITY, MO.



OUR NEW WAREHOUSE

Your **Kansas City Shipments**

consigned in our care will be handled with a degree of promptness and intelligence that will safeguard your own interests and give an added confidence to your customer.

Send Carloads to Track 5510 Kansas City Terminal

A-B-C Fireproof Warehouse Company

- 4 Fireproof Warehouses 4 -

KANSAS CITY, MO.

WE will not call your attention to our modern, wonderfully equipped, fireproof warehouse building, with a 16c. insurance rate and located in the very heart of the implement and freight depot districts, but wish to concentrate your attention upon the consistent, efficient organization we have IN our warehouse building. We are in a position to render you service that cannot be equaled in Kansas City, and our rates, we guarantee, will leave you with a profit.

L. T. CRUTCHER WAREHOUSE Co.

Distribution and Warehousing

1411 St. Louis Ave.

Kansas City, Mo.

KANSAS CITY, MO.

Fireproof Warehouse Convenient to All Freight Depots Send your consignments in our care

L. Leritz & Son

Members of I. F. W. A.

2616-18-20 Warwick



Ins. Rate 22c

KANSAS CITY, MO.

HOMER L. FARR, Mgr.

The Liberty Warehouse

1225-7 UNION AVENUE

Located in the heart of the wholesale district, with side tracks on Union Pacific. Specialists in the handling of distribution accounts. Motor Service.

KANSAS CITY, MO.

KANSAS CITY, MO.

In order to please your customers bill their goods to us and shipment will be handled in our usual intelligent, prompt and careful manner.

Collections Made and Returned Promptly

38 Years in Business

Oldest Firm in City

Member: National Furniture Warehousemen's Association

PERKY BROS.

Brarch Office, 217 E. 10th Street Warehouse, 2431-33 Prospect AUTO VAN SERVICE

The Men Who Distribute

Cook's Linoleum

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

KANSAS CITY, MO.

SOUTHWEST WAREHOUSE CORP.

KANSAS CITY, MO. 19th and Campbell Sts.

Motor Service for City Shipments



Low Insurance Rates

Modern Fireproof Warehouse, Nine Floors, 560,000 Square Feet

LOCATION
ON KANSAS CITY TERMINAL RAILWAY CO.
L. C. L. SHIPPING WITHOUT DRAYAGE.

STORAGE

DISTRIBUTION

SPACE

ST. LOUIS MO.

A Terminal-Transfer Company with an Ability to Serve

ST.LOUIS

Most Central

Distribution

Point in

United States

Nine Freight Depots; One Mile of Platforms
More than 250,000 Square Feet of Storage
and Warehouse Space

225 Teams and 75 Motor Trucks

We are especially well equipped for the prompt handling of consolidated cars for distribution both locally and for points beyond. When consigned care Columbia Terminals Company (La Salle Street Station) you get the benefit of

Daily Package Car Service from St. Louis to the West, Southwest and Southeast.

Leased Motor Truck
Service * By Hour, Day or

COLUMBIA
TERMINALS CO.

America's Largest Terminal-Transfer Organization

\$2,000,000 Capital

ST LOUIS, MO.

LANGAN & TAYLOR

Storage and Moving Co.

R. Lee Orcutt, Pres.



Largest Furniture
Warehouse in
St. Louis
Capacity 1,500,000 cu. ft.
Absolutely Fireproof

Largest Fleet of
Auto Moving Vans in
St. Louis
15 Enclosed Trucks
Latest Design

Warehouse and Office

Delmar Blvd. at Euclid Ave.

ST. LOUIS, MO. |

BEN A. LANGAN

FIREPROOF STORAGE CO.

5201 to 5209 Delmar Ave. ST. LOUIS

Expert Movers and Forwarders of HOUSEHOLD GOODS

Our Auto Truck Service is Unexcelled

LEWISTOWN, MONTANA

Duggan Transfer Company

LEWISTOWN, MONTANA
Pool Car Distributors

Fire Proof Warehouse

BILLINGS, MONTANA

Billings Warehouse & Trading Co.

Incorporated 204-216 North 21st Street

Branch House Service for National Distributors

Investigate the immense and rapidly developing territory for which Billings is the best distribution center.

MISSOULA, MONT.

Security Warehouse & Transfer Co.

(Incorporated)

Warehousing of every description: Storing, Packing, Carting, Shipping. R.R. Siding. Manufacturers' distributors. We solicit your Western Montana shipments.

The Men Who Distribute

Lux and Rinso

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

LINCOLN, NEBR.

Globe Delivery Co.

Merchandise and Furniture Storage Distributors and Forwarders 5 Warehouses—Trackage

Write us for explanation of Lincoln's advantages as a distribution center

LINCOLN, NEBR.



HEN you select your distribution and warehousing facilities for this territory take advantage of the experience and good reputation of this organization.

General Merchandise Storage and Distribution Household Goods Storage, Moving and Shipping

STAR VAN & STORAGE COMPANY

LINCOLN

OMAHA, NEBR.

Fidelity Storage & Van Company 1107-11 HOWARD STREET

Exclusive Household Storage

Removals - Packing - Forwarding State Bonded Warehouse

Special Attention to Safeguarding of Correspondents' Interests

All Collections Promptly Remitted

Central Warehousemen's Club

The Men Who Distribute

Porter Screens

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Men Who Distribute

Aluminum Products

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

OMAHA, NEBR.

Gordon Fireproof Warehouse & Van Co.

Main Office: 219 NORTH 11th STREET

Six warehouses covering over one city block. 200,000 square feet of floor space. Four warehouses equipped with automatic sprinkler systems.

Warehouses served by private tracks on the C. B. & Q. and the C. & N. W. (joint track); and the Illinois Central. All roads absorb switching charges.

Accommodations for brokers, jobbers, automobile manufacturers and dealers.

Household Goods Packed, Stored and Forwarded

MOVING — TRANSFER — FORWARDING

MEMBER

New York Furniture Warehousemen's Association.
Illinois Furniture Warehousemen's Association.
Central Warehousemen's Club.
Pacific Coast Furniture Warehousemen's Association.

OMAHA, NEBR.



NEW FIRE PROOF BUILDING

1,500,000 Cubic Feet Storage and Leasing Space, Sample Rooms, Office Space, Merchandise, Storage and Distribution Exclusively.

Mercantile Storage & Warehouse Company

Omaha, Nebraska.

We Specialize in Merchandise Distribution

NEV

NEV

OMAHA, NEBRASKA

"ADEOUATE FACILITIES WHEREVER GOODS GO"

We have every facility for handling whatever goods may be offered us

OMAHA FIREPROOF STORAGE CO.

16th and Leavenworth Sts.

OMAHA, NEBR.

THE "CITY OF OPPORTUNITY"

Represented by the

Pacific Storage & Warehouse Co.

1007-9-11 JONES STREET

We have studied the problems of the national distributor of manufactured articles and merchandise and have both the experience and facilities to care for business of this kind in a way that will satisfy the most critical.

Write us about the goods you have to be distributed in this territory and we shall be glad to quote prices for delivery, storage or reshipping.

MOTOR TRUCK SERVICE - 75,000 SQUARE FEET OF STORAGE SPACE

Members of the Central Warehousemen's Club

MANCHESTER, N. H.

I. BONNIN & SON STORAGE WAREHOUSE AND GENERAL TRUCKING

325 ELM STREET

ATLANTIC CITY, N. J.

ELDREDGE EXPRESS and STORAGE WAREHOUSE CO.

Office: 110 N. South Cardina Avenue

Inter-City Auto Service

Heavy Hauling



Railroad Siding and Storage Yard

Storage for Goods and Merchandise

Piano Moving

Phone 108

EAST ORANGE, N. J. Established 1887

R. T. BLAUVELT, Pres.

LINCOLN STORAGE WAREHOUSES

NON-FIREPROOF MOTOR EQUIPMENT FIREPROOF Members of New Jersey—New York—Illinois—Southern Warehousemen's Associations

Principal Office, 85 MAIN STREET

NEWARK, N. J. Estab. 1850 Jos. V. Lupo, Pres. & Treas. John F. Lupo, Sec.

JOB De CAMP, INC. 80 PARK PLACE

Transfer of Household Goods Freight, Heavy Haulage, Motor Service

Storage of Household Goods Mdse., New Autos, Imple-ments, Yard Storage.

Factory Distributors N. J. W. A. Member of A. W. A. and N. Y. F. . V. A.

NEWARK, N. J.

ESTABLISHED 1860

SHIP TO NEWARK'S LEADING FURNITURE and MERCHANDISE WAREHOUSE

KNICKERBOCKER STORAGE WAREHOUSE COMPANY

JOHN MULLIGAN

JAMES E. MULLIGAN SEC. & GEN. MGR.

MOVING, PACKING, DISTRIBUTING. SHIPPING, MOTOR EQUIPMENT

MEMBERS N. F. W. A. and N. J. F. W. A.

NEWARK, N. J.

LYON STORAGE CO.

97 Canal Street, Newark, N. J.

Finest cold storage equipment and ample space in reserve at all times for use of our clients.

Facilities for handling general merchandise are unexcelled in our territory.

We make a specialty of pool car distributing and reforwarding.

We will forward, store or distribute your merchandise, anywhere. Greater New York or metropolitan Jersey district distribution done quickly and economically. Forwarding shipments for European, Latin-American and other foreign ports through the Port of Newark is service we have developed particularly well for convenience of our clients.

Feel free at any time to ask any special service. Your patronage or inquiry is solicited for any warehousing or distribution service. Details on request.

Lyon Storage Company

NEWARK, N. J.

Phone 4370-1 Mulberry

Established 1882

Mooney's Storage Warehouse

556-558 Market St. 34-35-37 Van Buren St. NEWARK, NEW JERSEY

We Store and Distribute Merchandise Only

NEWARK, N. J.

Park Avenue Storage Company

359-365 Park Avenue, Newark, New Jersey Furniture and Warehouse Storage, Reinforced Concrete Buildings, on D., L. & W. R. R. Inquiries solicited for storage and distribution.

Member New Jersey Association

TRENTON, N. J.

"Expert Service"

Arcade Express & Storage Co.

Harry A. Douglass, Prop.

Merchandise and Furniture Storage Warehouse

Distributors and Forwarders In Main Business Section of City

Motor Van Service

13-17 East State Street, Trenton, N. J.

Bill via any R. R.

BINGHAMTON, N. Y.

THREE WAREHOUSES 33 Years in Busi-

Merchandise Distribution

and Pool Car Shipments Given Especial Attention

Storage of House-hold Goods, Merchandise, Implements and Machinery. Auto Trucks Heavy Haulage



COLE & GRAY

203 State Street

Binghamton, N. Y.

BINGHAMTON, N. Y.

MOLLEN TRANSFER & STORAGE CO.

-P. O. Box 872 TWO WAREHOUSES
SIDING ON ERIE WE SPECIALIZE IN
Merchandise Distribution—Pool Cars—also all classes Transfer Work.
Chamber of Commerce—Illinois and New York
Members
Furniture Warehousemen's Association.
American Warehousemen's Association.

BINGHAMTON, N. Y. Member Chamber of Commerce

JOHN B. SOUTHEE

STORAGE WAREHOUSE AND VAN OFFICE

MOVING AND TRUCKING OF ALL KINDS

178 STATE STREET

Office Phone 1366 House Phone 1799

Residence, 60 Moeller St.

TRENTON, N. J.

Petry Express & Storage Co.

STORAGE WAREHOUSES MERCHANDISE and HOUSEHOLD GOODS MOVERS-PACKERS-SHIPPERS MOTOR VAN SERVICE

Carloads Distributed. Manufacturers' Distributors. Members-A. W. A.-N. F. W. A.

BRONXVILLE, N. Y.

Gramatan Warehouse

New, Modern and Up-to-Date Furniture Warehouse ABSOLUTELY FIREPROOF

When sending shipments to Bronxville, ship to the GRAMATAN WAREHOUSE

Packing—Moving—Storage

R. R. Siding on N. Y. Central Railroad.

F. B. VALENTINE Manager

TELEPHONES: DAY-Bronxville 1456 NIGHT-Mt.Vernon 328-M

N.Y.F.W.A.

V.O.A.

ALBANY, N. Y.

SECURITY

STORAGE & WAREHOUSE CO., INC.

Jas. G. Perkins, Custom House Broker 1 DEAN STREET

Storage, Transferring and Forwarding Direct Track Facilities Pool Car Distribution

The Men Who Distribute

Jersey Cereals

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

BROOKLYN, N. Y.

When Shipping Your Household

To or From Brooklyn Have It Done Right-And Right Means By

HARRAGAN

"That's Me"

'Phone W'msb'g. 5047

Storing-Packing-Moving-Shipping

244-246 Havemeyer Street

Brooklyn, N. Y.

Mark Goods in Our Care, Eastern District Terminal, Brooklyn

Member N. F. W. A., N. Y. F. W. A. and S. F. W. A.

BROOKLYN, N. Y. Long Distance Phones Cable Address, Jenkinlis 3100-3101-3102 Bedford Western Union

ABSOLUTELY FIREPROOF

Long Island Storage Warehouses

Nostrand and Gates Avenues

BRANCH WAREHOUSES

881-891 Park Avenue

781-789 Kent Avenue

To save delay in consignments for delivery to any part of New York City or Brooklyn, mark goods in our care to "Eastern District Terminal, Brooklyn." This is the center of Greater New York—no delay due to congestion.

Try shipping this way. We know

BROOKLYN, N. Y. I

Fetablished 1880

Chas. D. Strang's Montauk Storage Company

187-100 So. PORTLAND AVE. 178-180 So. PORTLAND AVE.

Fireproof Branch: 356-360 Coney Island Ave.

Send your shipments to Brooklyn in my care. Both your customers and yourself will receive prompt, careful and courteous attention.

> Storage, Moving, Packing and Shipping of Household Goods.

N. Y. F. W. A.

I. F. W. A.

S. F. W. A.

BUFFALO, N. Y.

BUFFALO

STORAGE & CARTING COMPANY

STORAGE, TRANSFER AND FORWARDING

Warehouse on New York Central Tracks

BUFFALO, N. Y.

O. I. GLENN & SON

Everything in the Line of Moving, Carting, Packing, Storage

OFFICE: 204 TERRACE STREET

BUFFALO, N. Y.

WE WILL LOOK AFTER YOUR INTEREST AT BUFFALO

After

25 Years' Efficient Service We have recently completed a

SEVEN STORY

"UP TO DATE"

FIRE PROOF WAREHOUSE

The best in existence to-day; the last say in storage warehousing up-to-theminute.

FLUSH

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NOW

With our trained corps of experienced and expert workmen, our five warehouses, our large fleet of auto moving van trucks, and unequalled facilities

WE ARE AT YOUR SERVICE

and solicit your Buffalo shipments.

EXPERTS in storage, moving, packing and shipping household goods of every Cold Spring Storage Company

Members of Buffalo Chamber of Commerce, Illinois Furniture Ware-housemen's Ass'n, New York Furniture Warehousemen's Ass'n.

J. W. POWELL & SON, Props. & Mangrs.

RUFFALO, N. Y.

Monarch Storage & Warehouse Co., Inc.

"SERVICE"

In distribution of goods for National Merchandisers. 286-308 Elm St., Buffalo, N. Y.

BUFFALO, N. Y.

"Our Own" Delivery & Storage Co.

157-167 Georgia St.

3-93 Front Ave.

Household Goods stored, packed and shipped by experienced men.

CONVENIENT TO ALL RAILROADS AND DOCKS.

ELMIRA, N. Y.

WE SHIP SUDDEN

Located Main Line—D. L. & W. R. R. and Erie, Pa., L. V. railroads.

DISTRIBUTING AND WAREHOUSING

Best Warehouse in the Southern Tier.

Low insurance.

Reference: Second National Bank, Chemung Canal Trust Co. and many mercantile houses.

JOSEPH BIMBERG SONS

Elmira, N. Y.

ELMIRA, N. Y.

Elmira Storage & Sales Co., Inc.

BEST DISTRIBUTING POINT in Western New York and Pennsylvania.

Warehouse, 50,000 square feet floor space, can accommodate 100 cars of merchandise.

Free switching privileges D., L. & W., Erie, Penna. and L. V. railroads. Switch enters building; can load and unload under cover.

General Merchandise and Storage. Forwarding and Transferring a specialty.

Competent help in office and warehouse. We can be used as a branch house at no extra expense.

We do our own trucking.

FLUSHING, N. Y.

Blackham Storage & Trucking Co.

We do a general storage, moving, carting and packing business covering Flushing and Long Island. Try our service, you'll like it.

OFFICE: 72-74 GROVE ST., FLUSHING, NEW YORK

GLENS FALLS, N. Y.

H. A. STEVENS & SON

Furniture and Merchandise Storage. Local and Long Distance Moving, Packing, Crating.

NEW YORK, N.Y.

"Every Room is an Actual Vault"

Atlas Fireproof Storage Warehouse Co.

157 159 West 124th Street (near Seventh Ave.)

Moving—Packing—Storing—Shipping
A terminal of every railroad in immediate
vicinity. Bill "Harlem Terminal." Automobiles taken in dead storage.

Consign your shipment to us for proper attention.

NYFWA

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4.

NEW YORK, N. Y.

CAMPBELL STORES

WAREHOUSEMEN & TRUCKMEN

Hoboken, New Jersey

Just Across the River From New York City

TELEPHONE HOBOKEN 1576

The Men Who Distribute

Fels Naptha Soap

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Men Who Distribute

Bixby's Blacking

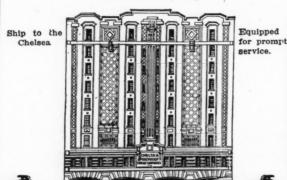
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NEW YORK, N. Y.

Chelsea Fireproof Storage Warehouses, Inc.

COMPLETE SERVICE TO SHIPPERS

Storage, Moving, Packing, Shipping, Express and General Trucking



Our Harlem Warehouse

Chelsea Fireproof Storage Warehouses, Inc.

LOUIS SCHRAMM, Pres. WM. F. HAHN, Secy and Treas.

Main Office
426-434 West 26th St.

Harlem Branch
112-120 West 107th St.

Members of

New York Furniture Warehousemen's Association Illinois Furniture Warehousemen's Association The Merchants' Association of New York NEW YORK, N. Y.



MORGAN & BROTHER

Storage Warehouses and Motor Vans

G. E. TACKER, Manager

MOVING

STORAGE

PACKING

Our reputation for handling collections on consignments is your guarantee in selecting us as your correspondent in New York City

Furniture and Works of Art Boxed and Shipped to All Parts of the World

230 - 232 - 234 - 236

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Times Square

Cable Address: MORGANWARE

Members:

National Furniture Warehousemen's Association New York Furniture Warehousemen's Association Van Owners' Association of Greater New York Merchants' Association of New York

NEW YORK, N. Y.

Important Announcement

Warehouse Receipt and Fire Insurance Policy -both in one document

A NOTHER INNOVATION in storage warehousing—Insured Warehouse Receipts!

Perfecting the feature of Automatic Commodity Insurance which it originated last year, Independent Warehouses, Inc., has just put into operation a plan under which the warehouse receipt issued to the customer is, at one and the same time, the fire insurance reclieve

The Insured Warehouse Receipt contains a clause, printed on the face of the receipt, certifying that the commodities are insured for a specific sum, based on the value declared by the customer.

The cost of the insurance under this *new* plan is no more than the cost of separate policies under the *old* method.

The insurance is automatic—it takes effect *immediately* upon the arrival of the commodities at the warehouse platforms, bulkheads, or in the streets adjacent thereto.

Another vital feature: the insurance passes current to the holder of the receipt for value immediately upon its negotiation, as his interest may appear.

Full details on request.

MEMORANDUM FOR BANKERS—This plan obviates the usual trouble and risk involved in obtaining, scrutinizing and caring for separate insurance policies as necessary documents incident to loans made against warehouse receipts.

INDEPENDENT WAREHOUSES, Inc.

415-427 GREENWICH STREET

NEW YORK

Inaugurated by GUARANTY TRUST COMPANY OF NEW YORK
and LIBERTY NATIONAL BANK OF NEW YORK

NEW YORK, N.Y.

Julius Kindermann & Sons

Three large fireproof storage warehouses adjacent to Washington Heights and all counties in Westchester section

1360-62 Webster Avenue, near 170th Street, Bronx

NEW YORK, N. Y.

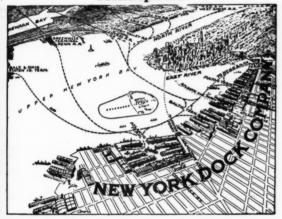
Mott Haven Storage Warehouse Co.

Fireproof and Non-fireproof Warchouses Factory Distributors — Motor Service Adjacent to all Bronx Terminals. Economic and Satisfactory Service

THIRD AVENUE AND 140th STREET

NEW YORK, N.Y.

Largest Bonded and Free Warehouse and Pier System in the Western Hemisphere



Occupying approximately $2\frac{1}{2}$ miles of the Brooklyn waterfront.

159 BONDED AND FREE WAREHOUSES having a storage capacity of 65,435,000 cubic feet or 116.2 acres of floor space.

34 PIERS

20 MANUFACTURING BUILDINGS
3 RAILROAD TERMINALS
Buildings for lease with lighterage and railroad facilities

NEWYORK DOCK COMPANY

44 Whitehall Street, New York Calendar showing map of New York Harbor sent on request

NEW YORK, N. Y.

Phone Spring 8732-8733

North River Warehouses, Inc.

606-608-610 Washington Street, New York City

Merchandise Storage and Distribution Centrally Located To All RR Terminals

The Men Who Distribute

Indian Motorcycles

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

NEW YORK, N. Y.

SHEPHARD WAREHOUSES

New York City 159 Hudson St.

Merchandise Storage and Distribution Pool Car Distributors

NEW YORK, N.Y.

A Room for Every Load of Furniture

The Tiffany Fireproof Storage Warehouses

1133-35 Tiffany Street, Bronx

When consigning your goods to the Bronx, ship to us. We are conveniently located near all railroad terminals.

Efficient service, our motto.

Packing — Shipping — Crating.

Members of N. Y. F. W. A., V. O. A. of Greater New York.

NEW YORK, N. Y.

To insure quick delivery and lowest handling expense consign all New York Shipments to Tooker Storage & Forwarding Co., 28th St. Erie R. R. Terminal; Chicago Shipments to Tooker Storage & Forwarding Co., 14th St. Erie R. R. Terminal.

TOOKER STORAGE & FORWARDING CO.

MERCHANDISE WAREHOUSEMEN

New York Office and Warehouse: 28th St. & 11th Ave. Erie R. R. Tracks Tel. Chelsea 7845-7846

Chicago Office and Warehouse: Clark & 14th Sts. Erie R. R. Tracks Tel. Victory 2360-2429

NEW YORK, N. Y.

Vandam Warehouse Co., Inc.

General Offices—No. 29 Broadway NEW YORK CITY

Phone Whitehall-353.

8 CITY WAREHOUSES

-1--

Waterfront Pier and Warehouses: MARINERS HARBOR, STATEN ISLAND NEW YORK, N. Y.

Ship Thru the Port of New York

To avoid loss of business thru transportation delays.

Prompt handling of your consignment in any quantity, large or small, will be our specialty. Your distribution and freight forwarding will be trucked with teams or motors as economy in the cost of carting dictates.

Modern fireproof storage building-located convenient to all freight terminals, also within two blocks of the New York State Barge Canal Terminal.

We furnish a complete service. Let us quote on your requirements.



General Merchandise Storage

665-73 11th Ave., and 601-03 W. 48th St. New York City

NIAGARA FALLS, N.Y.

WILLIAM YOUNG

TRANSFER AND STORAGE OF HOUSEHOLD GOODS

MACHINERY AND SAFE MOVING A SPECIALTY "Unexcelled SERVICE"

The Men Who Distribute

Dr. Kilmer's Remedies

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Men Who Distribute

United Drug Products

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The Men Who Distribute

Scott's Emulsion

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ROCHESTER, N. Y.



General Merchandise Storage

DISTRIBUTION AND FORWARDING

Insurance Rate 12c.

Service That Brings Results.

B. R. & P. Warehouse, Inc.

E. D. Davis, President Rochester, N. Y.

ROCHESTER, N.Y. Arthur S. Blanchard, President and Treasurer

Blanchard Storage Co., Inc.

HOUSEHOLD GOODS

Rochester "Chief" Rug and Carpet Cleaners

Allen and N. Washington Streets

Members New York and Illinois Furniture Warehousemen's Association

ROCHESTER, N. Y. T

Storage, transfer and forwarding of general merchandise. Only warehouse situated in center of city on N. Y. C. R. R. siding. Equipped with sprinkler system. Lowest insurance rates.

MONROE WAREHOUSE CO., INC.,

55-83 Railroad Street

Rochester, N. Y.

ROCHESTER, N. Y.

ROCHESTER CARTING CO.

Members New York Warehousemen's Association
Distributers of Car Load Freight
Unsurpassed facilities for Storing, Transferring and Forwarding
Merchandise and Household Goods
Two Large Storage Warehouses

162-164 ANDREWS STREET

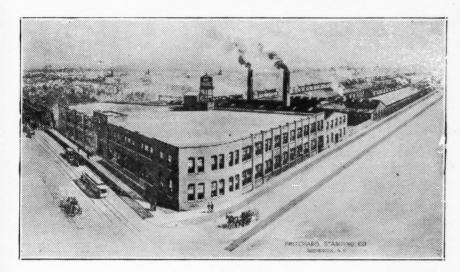
The Men Who Distribute

Babbitt's Soap

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

ROCHESTER, N. Y.

ROCHESTER'S LARGEST WAREHOUSE



Situated on the Main Line of the New York Central Railroad.

Located at the Hub of the Commercial and Residential Districts.

> Storage for General Merchandise and Household Goods

750 CARLOAD CAPACITY

Connections with All Railroads Entering City

Direct Switch Running Into Buildings

Local and Long Distance Hauling and Distribution

"Same Day Service"

Buildings Fully Equipped with Sprinkler System

PRITCHARD STORAGE & WAREHOUSE COMPANY

East Main Street & N. Y. C. R. R.

Rochester, N. Y.

ROCHESTER, N.Y.

JOSEPH A. SCHANTZ COMPANY

173-219 CENTRAL AVENUE



We have every facility for handling your Rochester shipments

Two Fireproof Warehouses Two Non-fireproof Warehouses Large Fleet of Modern Motor Vans

By mailing your Rochester bills of lading to us you are guaranteeing the most prompt and courteous service to your patrons. You are also protecting your own interests, because we will return all collections promptly and watch the details carefully.

Member of New York Furniture Warehousemen's Ass'n

SCHENECTADY, N.Y.

SCHENECTADY

is a natural Distributing Center. We make a specialty of L. C. L. Forwarding and Distribution of Pool Cars.

Two up-to-date Warehouses. Track connections with all Railroads entering City.

Storage of Household Goods, Merchandise, Implements, Yard Storage. Heavy Haulage. Motor Service.

SCHENECTADY STORAGE & TRUCKING COMPANY

SYRACUSE, N. Y.

The

Central City Storage & Transfer Co., Inc.

WILL FURNISH YOU

Satisfactory

Storage Distribution

Service

AT

SYRACUSE, N. Y.

PLUM & WILKINSON STS.

SYRACUSE, N. Y.

Flagg Storage Warehouse

TWO FIREPROOF WAREHOUSES

STORAGE OF GENERAL MERCHANDISE and HOUSEHOLD GOODS

We are in position to render quick and efficient service.

Centrally located to all jobbers and freight houses.

Correspondence Solicited.

100 Townsend St.,

Syracuse, N. Y.

The Men Who Distribute

Log Cabin Maple Syrup

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Men Who Distribute

Chester Paper Products

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SYRACUSE, N. Y.

King Storage Warehouse, Inc. Opposite N. Y. C. West St. Station



COMMERCIAL and FURNITURE STORAGE PRIVATE RAILROAD SIDINGS

DISTRIBUTING SERVICE
Carload or less carload shipments will receive prompt and careful attention. This branch of warehousing has been a specialty with us for over twenty years. We maintain our own delivery service.

service. HOUSEHOLD GOODS

We solicit your Syracuse business. Motor delivery service. Careful attention to collections. Satisfaction to yourself and customer guaranteed.

FOR SAFETY WE SHIP FURNITURE IN THE KING SHIPPING CASE

SYRACUSE, N. Y.

Service Is What You Need for Your Customers in Central New York



Our Warehouse Is
Designed for
Economic Service
and Modern
Warehousing

CONVENIENT TO BUSINESS AND SHIPPING DISTRICT

STRICTLY FIREPROOF

Our Facilities Are the Best. Our Organization Is Complete and Equal to All Emergencies.

Let Us Serve You in This Territory

GREAT NORTHERN WAREHOUSES, Inc.

350-360 W. FAYETTE ST., SYRACUSE, N. Y.

UTICA, N. Y.

Consign Utica Shipments

JONES-CLARK TRUCKING AND STORAGE CO., Inc.

127-135 Hotel St.

SPECIAL ATTENTION given to Merchandise Distribution and Pool Car Shipments. Storage of Merchandise, Furniture, New Autos and Machinery.

MEMBERS NEW YORK AND ILLINOIS ASSOCIATIONS

U. S. C. Bonded

Bill Via N. Y. C., D. L. & W., N. Y. O. & W.

UTICA, N. Y.

UTICA

CARTING & STORAGE COMPANY

Storage, Trucking, Forwarding, Shipping, Rigging, Transferring, Distributing, Checking, Packing

MOTOR VANS FOR LONG DISTANCE

Members New York and Illinois Associations.

CHARLOTTE, N. C.

UNION STORAGE COMPANY

General Warehousemen Merchandise Distributors Manufacturers' Agents

CHARLOTTE, N. C.

Center of Southern Textile Field Population Nearly 5,000,000 in 150-Mile Radius

RALEIGH, NORTH CAROLINA

Carolina Storage & Distributing Co.

Raleigh (Bonded)
We store, reship and distribute all classes of freight. Modern brick warehouses located on railroad tracks. Pool car distribution a specialty. Being centrally located, reaching a population of over 1,500,000 within a radius of 100 miles, and having excellent railway service. Raleigh is most logical distributing point for this territory.

MINOT, N. D.

CONSIGN YOUR SHIPMENTS TO

THE MINOT WAREHOUSE & STORAGE **FACTORY DISTRIBUTORS**

Household Goods and Merchandise Stored. Reinforced concrete building with brick walls and hollow tile inner

PRIVATE TRACKAGE MOTOR EQUIPMENT

MINOT, N. D.

J. B. REED STORAGE AND TRANSFER
BONDED WAREHOUSE

We make a specialty of acting as agents for Eastern jobbers and manufacturers in handling re-billing and distribution of goods of all kinds shipped to Minot for use in Northwestern North Dakota and Montana. We are equipped with storage facilities.

MINOT, N. D.

AKRON, OHIO

Akron Warehouse Company

211-215 S. Broadway AKRON, OHIO

Two Large Warehouses

Railroad siding at each warehouse

Household Goods and Merchandise Motor Truck Equipment

W. W. Sharp, President

P. S. Shaffer, Manager

The Men Who Distribute

"Skat"

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Men Who Distribute

Columbia Graphophones

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Meeting Place

Shippers and Warehousemen

NE of the largest national distributors, manufacturing a product known the world over, has announced that hereafter it will distribute exclusively through warehouses. In the selection of the warehouses to be used, DISTRIBUTION & WAREHOUSING has had an important This distributor, like hundreds of others of similar calibre, is a regular reader of DISTRIBUTION & WAREHOUSING and uses the Shippers' Index as a guide and source of information in the selection of the warehousemen with which to do business.

The Shippers' Index of DISTRIBUTION & WAREHOUSING is the meeting place of the man who needs warehouse facilities and the man who has them to offer.

AKRON COLUMBUS MANSFIELD

The Cotter Warehouses of Ohio

AKRON — COLUMBUS — MANSFIELD

(8 Warehouses)

(7 Warehouses)

(5 Warehouses)

THE UNION FIREPROOF WAREHOUSE CO. AKRON, OHIO

OPERATING

THE UNION FIREPROOF FURNITURE WAREHOUSES

AND

THE UNION TERMINAL WAREHOUSES

Merchandise Storage and Pool Car Distribution

B. & O., Erie & Penna. R. R. Sidings

Motor Vans

Packing

THE W. LEE COTTER WAREHOUSE CO.

COLUMBUS, OHIO

OPERATING

THE COLUMBUS TERMINAL WAREHOUSE

Fireproof and Non-Fireproof Warehouses

Merchandise Storage and Distribution

Save 35 to 50% freight by shipping in car lots.

THE COTTER TRANSFER & STORAGE CO.

MANSFIELD, OHIO

The Trunk Line City

Fireproof and Non-Fireproof Warehouses

Furniture and Merchandise Storage Distribution

MOTOR TRUCKS

HEAVY HAULING

CANTON, OHIO

The Canton Storage Co.

318 Cherry Ave., N. E.

CANTON, OHIO

"WE DELIVER EVERYTHING."

TWO LARGE WAREHOUSES ABSOLUTELY FIREPROOF.

MERCHANDISE & HOUSEHOLD GOODS STORAGE.

Car load lots and less than car load lots received, checked, distributed and forwarded.

Served by all Railroads Entering Canton

CANTON, OHIO

The Cummings Storage Co.

Cor. 4th and Walnut St., S. E. CANTON, OHIO

General Merchandise, Distribution and Household Goods Storage.

Fireproof and Non-Fireproof Buildings. Private Steel Lockers.

Unsurpassed facilities for handling pool car and car load shipments.

Railroad Sidings
Logical Distributor for this Section

CINCINNATI, O.

FRED PAGELS

Fireproof and Non-Fireproof

Business Established in 1867 and built up by A SERVICE THAT SATISFIES

Prompt Deliveries by Motor Complete Transfer Facilities

Member
of
National Furniture
Warehousemen's
Association
and
Ohio Furniture
Warehousemen's
Association

937 West 8th St.

Four blocks from any R. R. entering Cincinnati.



CINCINNATI, OHIO

"STACEY FIRST"



SERVICE

FIREPROOF AND NON-FIRE-PROOF WAREHOUSES

MODERN MOTOR VAN EQUIPMENT

RELIABILITY

Established 1891 Investment \$250,000 Your interests carefully protected

STACEY STORAGE CO.

2333 Gilbert Avenue

CINCINNATI, OHIO

Established 1858

We are equipped to handle carloads and less than carloads for out of town firms. Warehouse on Pennsylvania Railroad. Motor Truck and Team Service.

WALLACE TRANSFER & FORWARDING CO. 222 and 224 East Front Street

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Bill Your Shipments for Cincinnati to THE ZEIGLER-SCHAEFER CO.

2941-43 EASTERN AVE.
SIDING ON PENNSYLVANIA LINES

Moving - Storage - Packing - Shipping

Efficient and Courteous Service
Prompt Remittances

Prompt Remittances
COMPLETE MOTOR TRUCK EQUIPMENT

CLEVELAND, OHIO

JOHN BECKER

FIREPROOF STORAGE

2055 W. 41st St., Cleveland, O.

MOVING—PACKING—SHIPPING

West Side and Lakewood Shipments Solicited

MOTOR TRUCKS GIVE BETTER SERVICE.

WE USE THEM

The
KNICKERBOCKER
STORAGE CO.
7724 DETROIT AVE.

The
LINCOLN FIREPROOF
STORAGE CO.
5660-5704 EUCLID AVE.

The
LAKE SHORE MOVING
AND STORAGE CO.
664 EAST 105TH ST.

The SCOTT BROS. FIRE-PROOF STORAGE CO. 1838-40 EAST 55TH ST.

Members of National Furniture

FIREPROOF WAREHOUSES GIVE BETTER PROTECTION. WE HAVE THEM

The
NEAL FIREPROOF
STORAGE CO.
7208-16 EUCLID AVE.

5 LARGE WAREHOUSES

The REDHEAD STORAGE CO. 2041 EAST 105TH ST.

HOUSEHOLD GOODS EXCLUSIVELY

The
EUCLID AVE. FIREPROOF STORAGE CO.
11605-09 EUCLID AVE.

The
WINDERMERE
TRANSFER, MOVING
AND FIREPROOF
STORAGE CO.
14136 EUCLID AVE.

Warehousemen's Association.

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CLEVELAND, OHIO

THE CENTRAL STORAGE WAREHOUSE CO..

1843 East 55th Street

CLEVELAND, OHIO

5601 Hough Ave.

MERCHANDISE DISTRIBUTION-HOUSEHOLD GOODS STORAGE



One of the World's Largest Moving Vans

SERVICE IS THE THING FOR YOU AND YOUR CLEVELAND CUSTOMERS LET US SERVE THEM AS THEY SHOULD BE SERVED

OUR EQUIPMENT—FIREPROOF AND NON-FIREPROOF STORAGE OPERATING 40 MOTOR TRUCKS.
OUR ORGANIZATION IS COMPLETE AND IS MORE THAN AMPLE FOR THE LARGEST AND MOST DIFFICULT PROPOSITION. -WE CONSERVE YOUR INTERESTS-

CLEVELAND, OHIO

THE CLEVELAND STORAGE CO.

Established 1884

Offices: Guardian Building

Mercantile Storage Only

Pool Cars for Distribution and Reshipment

Convenient to Business and Shipping District

LOW INSURANCE RATES Sprinkler System

3 Warehouses, Private Siding, C. C. C. & St. L. R. R.

CLEVELAND, OHIO

THE CURTIS BRO.'S TRANSFER COMPANY

French, Winter and Fall Streets CLEVELAND, OHIO

MERCANTILE STORAGE AND GENERAL TRUCKING

Low Insurance Sprinkler System Private Siding on C. C. C. & St. L. R. R.

Pool Cars for Distribution Motor Truck Service

The Men Who Distribute

Frost Insecticide

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The Men Who Distribute

Bixby's Blacking

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

21

CLEVELAND, OHIO

We Solicit Your

Cleveland-Lakewood SHIPMENTS

Our new modern fireproof warehouse just completed.

Household Goods Only

Motor Equipment.

The Lakewood Fireproof Storage Co.

14401 Detroit Ave.

Cleveland-Lakewood, Ohio

Member: National Furniture Warehousemen's Ass'n

CLEVELAND, OHIO



3,000,000 cubic feet General Storage and Leasing Space.

1,250,000 cubic feet Cold Storage Space.

62 Car Capacity at one time.

New, Fire Proof Building

SERVICE

Is all we have to sell.

We solicit your business

Ninth Street Terminal Warehouse Co. WM. J. HOGAN, President Cleveland, Ohio

CLEVELAND, OHIO

W. C. WHEELOCK, Pres. & Gen. Mgr.

E. A. BRUNNER, Sec'y & Treas.

THE LIBERTY CARTAGE CO.

Automobile and Team Trucking

Office and Warehouse:

422-24 FRANKFORT AVENUE N. W.

CLEVELAND, OHIO

First Class Warehouse and Storage Facilities Both Team and Motor Winches CLEVELAND, OHIO



WHITWORTH'S Moving & Storage Company

1313 East 105th Street Cleveland, Ohio.

'Phone, Cedar 1123

We give special attention to car loading and freight forwarding

CLEVELAND, OHIO

L. WURM MOVING AND STORAGE CO.

7903 Superior Ave. Rosedale 2741

Cleveland, Ohio



COLUMBUS, OHIO

Safety First

Warehouse:

1328 E. 80th St Rosedale 1198

The Fireproof

Long Distance Hauling a Specialty.

Warehouse & Storage Company

1018-30 North High Street Columbus, Ohio

TRANSFERRING - STORING - PACKING

We have one of the finest warehouse plants in the state; being steam heated throughout, equipped with a sprinkler system, absolutely fireproof. The cheapest rate of insurance. Located handy to all railroads, we are able to deliver the best service obtainable anywhere. We solicit your shipments to our city and assure you we will reciprocate. P. A. DOLLE, General Manager.

Motor Truck Service

Vaults for Valuables

Private Rooms

COLUMBUS, OHIOT

THERE IS NOTHING TOO LARGE NOR TOO SMALL FOR US TO HANDLE

THE BUCKEYE

TRANSFER & STORAGE COMPANY

COLUMBUS, OHIO Expert Packers

Reliable Movers

Absolutely Fireproof The Great Western Storage Company

Storing, Crating, Forwarding, Distributing

Car Lots of Merchandise Stored for Distributing Local and Long Distance Hauling. Separate Sealed Rooms for Household Goods.

Located on the Pennsylvania Lines
766 to 776 West Broad Street COLUMBUS, OHIO

COLUMBUS, OHIO

THE

KUTSCHBACH-MCNALLY CO.

Complete Facilities for Storing and Forwarding HOUSEHOLD GOODS and MERCHANDISE

Siding on Pennsylvania Tracks Manufacturers' Distributors MOTOR Equipment
Member Interstate Warehousemen's Association

COLUMBUS, O.

The Merchandise Storage Company

Columbus, Ohio

General Storage & Distribution

SERVICE THAT WILL SATISFY

DAYTON, OHIO

THE LINCOLN STORAGE CO.

"Fireproof"

BIG 4 TRACK IN BUILDING. Members N. Y. & I. F. W. A.

313-315 EAST FIRST STREET

A. B. Compton, Vice-President

DAYTON, OHIO

R. B. TAWNEY

Long Distance Hauling a Specialty Furniture and Pianos Stored and Packed for Shipping 427 HICKORY ST., DAYTON, OHIO 'Phone, Fairview 3234—Home 'Phone, Fairview 2515

DAYTON, OHIO

THE UNION STORAGE CO.

U. S. BONDED

BAINBRIDGE, BACON & STATE STREETS MERCHANDISE STORAGE TRANSFER DISTRIBUTION

SPRINGFIELD, OHIO

THE

Citizens Transfer and Storage Co. Lowry Ave. and Big Four R. R., Springfield, Ohio

STORAGE OF
Merchandise and Household Goods
Forwarders and Distributors
W. A. HANCE

MEMBER: OHIO WAREHOUSE AND TRANSPORTATION ASSOCIATION

21

SPRINGFIELD, OHIO Bill All Shipments for Springfield, Ohio, to

WAGNER

FIREPROOF STORAGE & TRUCK CO.

Siding on Pennsylvania Lines

Complete Facilities for Distribution of Pool Car Shipments
Moving—Packing—Shipping—Storing
Household Goods and Merchandise

TOLEDO, OHIO

DEPENTHAL

TRUCK & STORAGE COMPANY

108 SUMMIT STREET

Member of New York, Illinois, and Southern Furniture Warehousemen's Associations

TOLEDO, OHIO

THE GENERAL FIREPROOF STORAGE CO.

651-655 STATE STREET

Household Goods Exclusively

Illinois Furniture Warehouse Association Members: American Warehouse Association

TOLEDO, OHIO

HOUSEHOLD GOODS EXCLUSIVELY

Established 1894

The H. C. Lee & Sons Co. TOLEDO'S LEADING MOVERS

STORAGE

MEMBER N. F. W. A. Toledo, Ohio

TOLEDO, OHIO

MANOR STORAGE CO.

516-530 Sumner Street TOLEDO, OHIO MERCHANDISE DISTRIBUTION HOUSEHOLD GOODS STORAGE

THE TOLEDO

MERCHANTS' DELIVERY COMPANY

215 SO. ST. CLAIR ST AUTO SERVICE—FIREPROOF STORAGE Local and long distance hauling

Household Goods and Automobiles Moved, Packed, Shipped and Stored. Safes, Boilers, Machinery and Smokestacks Moved.

100% SERVICE
Reference: Second National Bank, or any bank in Toledo

TOLEDO, OHIO

The Toledo Terminal Warehouse Co. 928-930 GEORGE STREET

TOLEDO, OHIO

STORAGE OF MERCHANDISE Special Attention to Pool Car Distribution

The Men Who Distribute

Carey Salt

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

YOUNGSTOWN, O.

The

Fisher-Gilder Cartage & Storage Co. Fireproof Storage, Moving, Packing and Shipping



Expert Handlers of Household Goods

Manufacturers' Merchandise Distributors. Private Siding B. & O. R. R.

MOTOR TRUCK SERVICE

90,000 cubic feet of Fireproof Warehouse Space.

Members: American, New York, and Illinois Warehousemen's

574-576-578-580 MAHONING ST. YOUNGSTOWN, OHIO

YOUNGSTOWN, OHIO



Local and Long Distance Hauling Manufacturers' Distributors Carload Distribution

ZANESVILLE, OHIO

ALBERT ADAMS
STORAGE AND TRANSFER CO.
25-29-33 Ninth St.
Merchandise and Household Goods
facturers' Distributors
50,000 Square Feet of Floor Space Manufacturers



OKLAHOMA CITY, OKLA.

Fireproof
Warehouses for
Household
Goods and
Merchandise.

Members of I.F.W.A., New York, American Chain, Central, Southern, Pacific Coast Warehousemen's Assoclation.



O.K. Transfer & Storage Co.

A. C. WEICKER, President

MUSKOGEE, OKLA.

Muskogee Transfer & Storage Co.

2—Fireproof Warehouses

Merchandise and Household Goods Stored—Pool Cars Distributed Railroad Siding.

ERIE, PA. T

ERIE

STORAGE & CARTING COMPANY



HARRISBURG, PA.

Pool Cars

Received-Checked-Distributed and Forwarded in Less Than Car Lots

Penna. RR Harrisburg Storage Co.
Sidings Harrisburg, Pa.

HARRISBURG, PA.

MONTGOMERY & CO.

STORAGE WAREHOUSES

Merchandise Storage—Transferring—Forwarding

Direct Track Facilities Pool Car Distribution

Members A. W. A. and American Chain of Warehouses

LANCASTER, PA.

KEYSTONE STORAGE COMPANY

STORAGE—DISTRIBUTORS—FORWARDERS
Merchandise and Household Goods

MANUFACTURERS' DISTRIBUTORS MOTOR SERVICE Siding on P. R. R. and P. & R.

LANCASTER, PA.

Lancaster Storage Co.

Lancaster, Pa.

Merchandise Storage, Household Goods, Transferring, Forwarding

Manufacturer's Distributors, Carload Distribution Local and Long Distance Moving Railroad Sidings

OIL CITY, PA.

CARNAHAN

TRANSFER & STORAGE COMPANY

R. C. LAY, Proprietor

Piano Moving a Specialty

Distributing and Forwarding Agents; Packing
Fireproof Warehouse

PHILADELPHIA, PA.



Our large fleet of motor trucks enables us to render quick and efficient service to your patrons.

We are accessible to all depots and suburbs of our city. Our warehouses are within two blocks of North Philadelphia Station of the Pennsylvania Railroad and the 12th and York Streets Station of the Philadelphia & Reading or the Baltimore & Ohio. Private siding at our Branch Warehouse, West Philadelphia. Consign goods Angora, Pa. (Penna. System.)

Collections through our office will assure prompt returns.

Fireproof and Non-Fireproof Warehouses

Miller North Broad Storage Co.

2709-2721 North Broad Street

PHILADELPHIA, PA.



PHILADELPHIA, PA.

Penn Storage & Van Co. 2136 MARKET STREET

The Men Who Distribute

Pepsin Syrup

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

PHILADELPHIA, PA.

Philadelphia Local Express

1004-1026 Spring Garden Street

Manufacturing Distributors

Philadelphia, Germantown, Chestnut Hill, Camden, N. J., Frankford

PHILADELPHIA, PA.



MANUFACTURERS' DISTRIBUTORS

Direct delivery service throughout Philadelphia and Camden :: :: Correspondence solicited

Address

Office—5th and Byron Streets CAMDEN, N. J.

PHILADELPHIA, PA.



Columbia Avenue Warehouse

1511-1519

Household Goods Exclusively

Motor Equipment

Moving—Packing—Shipping

TERMINAL WAREHOUSE

TRANSFER CO.

Green Street and Delaware Avenue PHILADELPHIA



Delaware Ave. and Green St.
Warehouse
Water Front
Pool Car Shipments
Manufacturers' Distributing

9 Warehouses—16 Acres of Floor Space—Trackage Facilities for 17 Cars

Large Organization. Competent Office Warehouse Staff
Members American Warehousemen's Association—American Chain of Warehouses

PHILADELPHIA, PA.

Before Shipping to Philadelphia, Pa.

read this letter from the client of a Chicago warehouse who was advised to ship in care of the 20th Century Storage Warehouse Co. On Aug. 18th this is what he wrote them:

"Following your suggestion I got in touch with the 20th Century Warehouse and they handled the unloading of my four freight cars and the unrating at my house in Haverford. It took them only two days to move all of the furniture from our cars to the house; their men hustled every minute and did their work exceptionally well.

"I thank you for recommending the 20th Century to me and I feel that in the future you will make no mistake in sending other patrons of yours to them."

20th Century Storage Warehouse Co.

3120-30 Market Street, Philadelphia

Opposite West Philadelphia Station

PITTSBURGH, PA.



Fireproof will grow more storie



BLANCK'S Transfer & Storage Co.

Moving, Packing and Storage

MOTOR TRUCK SERVICE SEPARATE ROOMS FOR STORAGE



Fireproof

6344 Penn

E.E.



PITTSBURGH, PA.

HASLEY BROTHERS

TRANSFER AND STORAGE

939 So. Canal St., N. S.

MOVERS, PACKERS, SHIPPERS OF HOUSEHOLD GOODS FIRE PROTECTED STORAGE-MEMBERS A. W. A.

PITTSBURGH, PA.

SERVICE TO THE CORRESPONDENT



CONSISTS in giving the correspondence of those we represent prompt acknowledgment, safeguarding their interests, mailing checks in settlement of accounts. and furnishing final reports of transactions.

THIS service also includes an element of importance: - the handling of shipments upon arrival in a manner conducive to joint customer's approval, whose future business we are always eager to secure.

Ship via Pennsylvania to East Liberty Station, (Pittsburgh, Pa.)

Established 1889

HAUGH & KEENAN STORAGE AND TRANSFER CO.

CENTRE AND EUCLID AVENUES

PITTSBURGH, PA.

HOEVELER

WAREHOUSE COMPANY

MOVERS AND STORERS

AVENUE MILLVALE

PITTSBURGH, PA.

Interstate Trucking Company
Twenty-Fifth St. & A.V.R.R. 1, 2, 3½ and 5 ton trucks
GENERAL HAULING ON HOURLY OR TONNAGE BASIS
Carload Freight and Long Distance Hauling
Experienced Men—Good Experiment Coll on Us—Save Time and Money

Trucking Agents for Pennsylvania Transfer and Storage Company

THE PURCHASING POWER

of the field covered by

Distribution and Warehousing

is that of an industry with a total investment of more than \$1,000,000,000.00

PITTSBURGH, PA.

MURDOCH

STORAGE & TRANSFER COMPANY

General Office, and Warehouses

546 NEVILLE STREET PITTSBURGH, PA.

Branch Warehouse, Wilkinsburg, Pa.

Murdoch Means Service

PITTSBURGH, PA.

J. O'NEIL EXPRESS & STORAGE

N. S. PITTSBURGH, PENNA.

Furniture and Piano Moving a Specialty. General Hauling.

NEW FIREPROOF STORAGE HOUSE

Separate Rooms

PITTSBURGH, PA.

Pennsylvania Transfer & Storage Co.

JAMES SIMPSON, President EDWARD C. LITTLE, General Manager

Receiving and Warehousing of General Merchandise in Carloads or Less than Carloads.

POOL CARS DISTRIBUTED AND RESHIPPED

Special Facilities for Handling and Storing Liquors and Barreled Goods.

Merchandise Stocks Carried and Records Kept for Out-of-Town Concerns.

Rates and Quotations Promptly Furnished.

PENNSYLVANIA RAILROAD SIDING

Warehouse No. 1—Twenty-fifth St. and A. V. R. R.

TRUCK DELIVERY ONLY

Warehouse No. 2—1629 Liberty St. General Offices: Twenty-fifth St. and A. V. R. R., Pittsburgh, Pa.

PITTSBURGH, PA.

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WEBER

EXPRESS & STORAGE COMPANY

GENERAL HAULING

Moving, Packing and Storing of Furniture and Pianos

4620 HENRY STREET

PITTSBURGH, PA. [

SHANAHAN

Transfer & Storage Company

Established 1865



CONSIGN PITTSBURGH SHIPMENTS IMMEDIATE RETURNS ON RECEIPT OF BILL OF LADING FIREPROOF STORAGE FOR HOUSEHOLD GOODS ONLY ALL SEPARATE APARTMENTS

5th Ave. at McKee Place, PITTSBURGH, PA.

READING, PA.

Columbian Warehouse Company

Storage, New Merchandise Exclusively.

Modern Building, Lowest Insurance Rates.
S. W. Cor. 5th & Laurel Sts.

SCRANTON, PA.



SCRANTON, PA.

Established 1894.

"He Profits Most Who Serves Best" (Rotary)

The Quackenbush Warehouse Co.

Warehousing of every description. Storing, Packing, Carting, Shipping. R.R. Siding. Manufacturers Distributors.

Correspondence Solicited

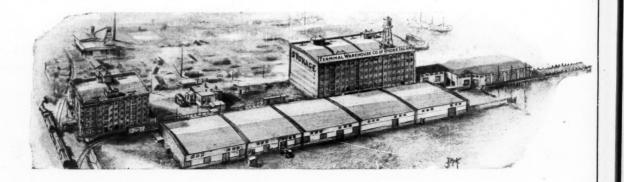
Scranton, Pa.

PROVIDENCE, R. I.

TERMINAL WAREHOUSE CO. OF RHODE ISLAND

Allen Avenue, Foot of Oxford Street on Providence River PROVIDENCE, RHODE ISLAND, U. S. A.

The most modern Storage Warehouses in New England, with side track capacity for 75 cars—Also several acres of yard storage



Our Location center of the Manufacturing Industries of New England. Deliveries either by Rail or Motor Trucks from our location to most any point in New England. Lowest Insurance Rates. Direct Track Connection N. Y., N. H. & H. R. R. Shipping Directions, South Providence, Rhode Island. Good Depth of Water. Weighing, Sampling and Shipping by Experts permanently employed.

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PROVIDENCE, R. I.

CADY MOVING & STORAGE CO.

STORAGE WAREHOUSES Household Furniture and Pianos Packing, Crating and Shipping. 62 to 70 Dudley Street.

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Aberdeen Storage Company

Storage and Distributers

CHATTANOOGA, TENN.

THE CHATTANOOGA TRANSFER & STORAGE CO.

Fireproof Warehouse

Furniture

Merchandise

Packed Stored Shipped

Heavy Hauling

Motor and Horse Drawn Equipment

NASHVILLE, TENN.

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E. M. BOND FIREPROOF STORAGE CO.

HOUSEHOLD GOODS AND MERCHANDISE
Modern Fireproof Building
Private Siding With All Rail Connections.

The Men Who Distribute

Winchester Arms and Ammunition

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Men Who Distribute

Tidewater Oil

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Men Who Distribute

Ritter Dental Supplies

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

DALLAS, TEXAS

CARLOAD DISTRIBUTION & STORAGE

Merchandise and Household Goods

The Inter-State Forwarding Co.

Cor. Elm & Jefferson St.

The Center of the Wholesale District

120,000 Sq. Ft. on T. & P. R. R. Capacity Unloading 12 Cars Per Day.

Maintains an organization for service in all branches of Warehousing and Distribution

W. I. FORD and R. E. EAGON
Associate Managers

EL PASO, TEXAS

EL PASO, TEXAS GATEWAY TO OLD MEXICO

General Storage and Carload Distribution Merchandise and Household Goods Moving, Packing and Shipping

60,000 sq. ft. Fireproof Storage Space 150,000 sq ft. Semi-Fireproof Construction

LET US HANDLE YOUR EL PASO BUSINESS AS IT SHOULD BE HANDLED. MAKE OUR WAREHOUSE, YOUR BRANCH HOUSE.

International Warehouse Co., Inc. 1601 Magoffin Ave., Cor. Lee St.

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MEMBERS CENTRAL WAREHOUSEMEN'S CLUB

EL PASO, TEXAS

R. L. Daniel Storage Co.

Box 487, 1706 Texas, 2813 Durazno Sts.

Our hobby is the crating, packing, shipping and storing of household goods. Consign your goods to us for proper attention. Member, National Furniture Warehousemen's Assn.

EL PASO, TEXAS

WESTERN

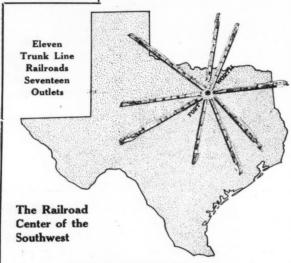
TRANSFER & STORAGE COMPANY
1125-31 TEXAS STREET

ONLY FIREPROOF STORAGE IN EL PASO

Forwarders and Distributers—Trucking of all kinds—Distribution

Cars a specialty—Warehouse on Track

FORT WORTH, TEX.



Write For Our Booklet

We have prepared a booklet concerning Fort Worth, North and West, Texas and the Binyon-O'Keefe service.

A copy will be mailed to you on request.

BINYON-O'KEEFE Fire Proof Storage Co.

Members American Warehousemen's Association and National Household Furniture Warehousemen's Association.

The Men Who Distribute

Pepsi-Cola

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

The Men Who Distribute

Scott's Emulsion

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

FORT WORTH, TEXAS

Fort Worth Warehouse & Storage Co.

INCORPORATED

Merchandise Distribution, General Storage Manufacturers' Representative

PRIVATE SIDING WITH ALL RAIL CONNECTIONS

Fort Worth with its seventeen railways is the logical distributing center for Texas and the Southwest.

Absolutely Fireproof Warehouses

MCALLEN, TEXAS

Valley Storage Company

Storers and Distributors of Merchandise in Rio Grande Valley

Crating and Shipping

We Solicit Your Patronage

McAllen, Texas

SAN ANTONIO, TEXAS

FPFIGHT

Established 1880 AUTO SERVICE

STORAGE

OFFICIAL DISTRIBUTORS MERCHANTS' TRANSFER CO.

SAFETY

COURTESY

SERVICE

The Men Who Distribute

Premier Brand Groceries

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

SAN ANTONIO, T. XAS



Two Large Fireproof Warehouses

With Lowest Insurance Rates Capacity 1,250,000 cu. ft.

Members four leading associations

GENERAL WAREHOUSING AND DISTRIBUTION

Write for freight tariff to all points in San Antonio territory.

SCOBEY FIREPROOF STORAGE COMPANY
San Antonio, Texas

TEXARKANA, ARK.

HUNTER TRANSFER CO.

TEXARKANA, ARK.

STORAGE

TRUCKING

DISTRIBUTORS

MOVING

WACO, TEXAS

MASON

TRANSFER & STORAGE COMPANY

217-219 JACKSON STREET

Merchandise Storage, Forwarders & Distribution Trucking of all kinds. Warehouse on track. 7 Denby Trucks

WACO, TEXAS

Weatherred Transfer and Storage Co., Inc. Modern Warehouse Facilities—Trackage on all roads 100,000 SQUARE FEET STORAGE SPACE

We do pool car distributing, moving, packing, shipping, storage, long distance hauling by trucks.

The Men Who Distribute

Mellin's Food

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

SALT LAKE CITY, UTAH

Members | American Warehousemen's Association | Central Warehousemen's Club

Jennings-Cornwall

Warehouse Company

Merchandise storage and distribution. Track connections and free switching with all railroads. Modern fireproof building. Insurance rate only 18 cents. Motor delivery service.

Our long experience in the storage and distribution of manufactured articles, together with our modern building and equipment, fits us to give you the very best service in the handling of your account. Correspondence solicited.

SALT LAKE CITY, UTAH

SALT LAKE CITY IS A

NATURAL DISTRIBUTING CENTER

We Make a Specialty of Carload Distribution

Tyng

Warehouse and Storage Company

MERCHANDISE WAREHOUSING AND DISTRIBUTION COLD STORAGE

Served by all railroads

Salt Lake City, Utah

142,000 Square Feet of Floor Space

PETERSBURG, VA. HOPEWELL, VA.

Distributing and Forwarding

POOL CARS

Furniture stored and crated

SOUTHERN BONDED WAREHOUSE CORP.

The Men who Distribute

"Jello"

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index.

ABERDEEN, WASH. [

A. A. STAR TRANSFER CO.

401-403 SOUTH F STREET

ABERDEEN

WASHINGTON

WE DO EVERYTHING IN THE LINE OF MOVING

Our Hobby CRATING

Equipped to Handle Distributors of SAFES

FREIGHT

PACKING STORAGE **PIANOS** MACHINERY H.H. GOODS BAGGAGE

Consign Your Shipments to Us for Proper Attention

SEATTLE, WASH.



TRANSFER CO.

SEATTLE

WASH.

Merchandise Distributors

DISTRIBUTION CARS. Delivered, Forwarded or Stored.

RAILROAD CONNECTIONS.

POOL CARS. Furniture Packed, Shipped or Stored. ASSOCIATION MEMBERS.

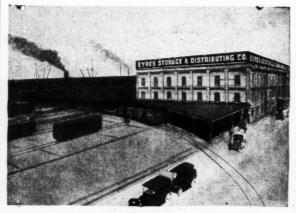
ESTABLISHED 1905

FIREPROOF STORAGE

LOW INSURANCE

SEATTLE, WASH.

EYRES STORAGE and DISTRIBUTING CO.





Established 1889 Incorporated 1904 Free & Bonded

Warehouses Seattle, Wash.

GENERAL MERCHANDISE STORAGE MACHINERY STORAGE

HOUSEHOLD GOODS STORAGE POOL CAR DISTRIBUTIONS

> OPERATING 30 TEAMS, 24 AUTOS SERVICE OUR MOTTO

SEATTLE, WASH.

United Warehouse Company

SEATTLE, WASH. Established 1895

GENERAL STORAGE AND DISTRIBUTING

TACOMA, WASH.



WE OWN BOTH WAREHOUSES

Established 20 years in Tacoma—and know how to handle your requirements

Storage (bonded and free) Merchandise and H. H. Goods Moving and Packing by Experts Collections Remitted Promptly C. L. & L. C. L. Distribution We Solicit Your Business

TACOMA, WASH.

PACIFIC STORAGE and TRANSFER CO., Inc.

Merchandise and Furniture Storage

Distributors and Forwarders

Merchandise and Furniture



SEND YOUR POOL CARS IN OUR CARE Auto Truck and Transfer Service

N. P. RY. SIDE TRACKS BROADWAY AND 17th STREET

YAKIMA, WASH.

MILLER & LENINGTON

CONTRACTORS

DISTRIBUTING and FORWARDING AGENTS

TRANSFER-STORAGE-WAREHOUSING

Motor Trucks and Team Equipment for All and Every Kind of Hauling

SHIP IN OUR CARE and let us be "At your service with best of service"

Office: 10 East A Street

Sidney Hotel Bldg.

'Phone 571

The Men Who Distribute

Bon Ami

Read DISTRIBUTION & WAREHOUSING and consult the Shippers' Index

YAKIMA, WASH.

J. J. CRAWFORD, PRES.

E. NORTON, SEC

YAKIMA TRANSFER & STORAGE CO.

Office and general storage warehouse No. 25 North Front directly opposite Northern Pacific passenger station.

22,000 square feet of compartment sto age for household goods, pianos etc.

Track warehouse No. 11 South First Ave, 30,000 square feet of floor space devoted exclusively to the storage of merchandise. Every facility for clean, economical, storage and handling of commercial accounts.

Auto trucks and teams.

CHARLESTON, WEST VA.

Mathews Storage & Transfer Co.

Warehousing—Distributing—Forwarding—Transfer Merchal.dise—Automobiles—Household Goods Brick and Concrete Warehouses—Private Ry. Siding.

Members: American Warehousemen's Ass'n American Chain Warehouses Motor Truck and Team Service.

KENOSHA, WIS.

DAVID NELSON

KENOSHA

FIREPROOF STORAGE WISCONSIN

Packers and Shippers of Household Goods

We Reach All Suburban Points

51-71 VICTORIA STREET

KENOSHA, WIS.

MADISON, WIS.

H. F. SHARRATT

30,000 sq. ft. Fireproof Storage

30,000 sq. ft. Non-fireproof Storage

Household Goods—Merchandise—Automobiles—Separate Locked Rooms—Separate Piano, Rug and Trunk Rooms—Negotiable Receipts—Local and Long Distance Moving—Packing—Shipping—Heavy Hauling—Distributing

MADISON, WISC.



Finest Warehouse in Wisconsin

PHONE 1254

FURNITURE PACKING

Local and Long Distance Moving

MILWAUKEE, WIS.

Lincoln Warehouse and Van Co. 226-228-230 Fourth Street MILWAUKEE, WIS.

We remit upon receipt of bill of lading

MILWAUKEE, WIS.

Hansen Storage

Company

Capital Stock \$1,000,000.00

MILWAUKEE, WIS.

We Can Solve Your Problems in Storage and Forwarding

General Storage—Automobile Trucking
Forwarding—Distributing

50 Car Sidetrack

Member American Chain of Warehouses

MILWAUKEE, WIS.

For the Greatest Satisfaction

To both yourselves and your customers consign your Milwaukee shipments to

United Fireproof Warehouse Co.

392 Prospect Ave., Milwaukee, Wis.



Good service built this new fireproof warehouse.

The newest and best in Milwaukee.

RACINE, WIS.

When You Need Warehouse Service

in

RACINE, WISCONSIN

Call on us

Racine Transfer & Storage Co.

CASPER, WYOMING

The Pioneer Warehouse & Transfer Co.

GENERAL TRANSFER and STORAGE

Office and Warehouse: cor. Market and W.A.Sts.

Casper, Wyoming

Telephone 988

TWO MESSAGES:

1.-To the Manufacturer:

The shipper who is in the market to buy distribution service will discover what he wants in the Shippers' Index in Distribution and Warehousing. Therein the merchandise storage men are telling month by month the story of the facilities they have to sell. These pages constitute the biggest publicity medium which the warehousemen have anywhere for letting the manufacturer know what they have to offer in the territory in which each is situated. The shipper who is constantly searching for new distribution channels in the development of his business has come to know through experience that there is no other medium which so nearly approaches the ideal for coming into contact with the warehousemen who, leaders in their industry, build on foundations of economy and good service.

2.-To the Warehouseman:

The storage executive who advertises consistently and informatively his distribution facilities is making the most of expanding business opportunities and is building a firm foundation for the business of tomorrow. The warehouseman who, by neglecting to advertise, does not tell the shippers what they want to know, retards his own growth and lets his competitor who does advertise get the dollars. And there has never been a time before this when manufacturers were so much interested in and so extensively adopting the broad plan of warehouse distribution.



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Does Gravity Work in Your Plant?

Or do you use valuable labor and power to do your lugging when you can put this free power to work?

The Mathews Gravity Conveyer has set gravity to hauling the products of a host of manufacturers-through the intricate steps of production, from floor to floor in the factory, from building to building, and in the yard gravity does the drudge work of lugging and hauling from the cars until the product is finished.

And a negligible amount of power is expended. When there is an unavoidable lift, a Mathews Automatic Elevator takes care of it. But gravity—free gravity—does the bulk of the work and at a surprising saving in the cost of conveying.

Whatever you have to carry—whether it is heavy castings or candy boxes, whether your problem is simple or complex, there is a Mathews System that can be adapted to do the job. One of our sales engineers will gladly talk your problem over with you and give you the benefit of our experience in conveying. Our catalog shows a variety of latest installations. Write for it.

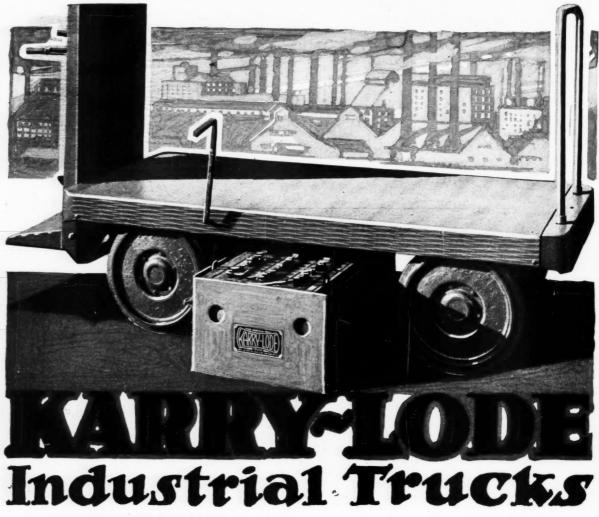
The Mathews Gravity Carrier Company
Ellwood City, Pa.

134 Tenth Street









ACCESSIBILITY

A feature of Karry-Lode construction is the demountable battery. The Karry-Lode Battery is quickly accessible for watering or battery changing.

In Design and Construction Karry-Lode Industrial Trucks or Tractors are made to render economical and efficient service. Write for further evidence.

Model No. 1, High-platform Truck, \$1,395.00

Model No. 2, Low-platform Truck, \$1,495.00

Model No. 3, Tractor, - - - \$1,595.00

KARRY-LODE INDUSTRIAL TRUCK COMPANY, Inc.

MANUFACTURERS

Long Island City, N. Y.



The King Shipping Case packed—ready to be shipped.

Rough Treatment By Freight Handlers Has No Terrors For the King

And there is no such thing as a ware-houseman being sued for thievery, damage, etc.—when King equipped.

The King Shipping Case provides a simple—yet strong and absolutely safe—means of forwarding household goods from one point to another. It is designed to cut the high cost of crating and eliminate the many discomforting accidents—common to crated shipments.

And consider your customer. Once his goods are packed in a King Case, he knows there is no chance of anybody handling, stealing or misplacing his valuable property. For it is sealed securely and the seal is not broken until his goods arrive at destination.

The merits and various uses of the King Case aroused quite a bit of discussion at the annual convention of the American Warehousemen's Association last Decem-

ber. Many test shipments were made by the Committee of Economics in Packing and Shipping and in every instance the transaction terminated with perfect satisfaction to the customer—with greatly decreased trouble and increased profits to the warehousemen.

The Investigators have yet to report a single case of discontentment.

The King Case is made of stout 22 gauge steel, reinforced throughout by sturdy angle iron supports. It is 7 feet high, 7 feet long and 4 feet wide. Mounted on heavy wheels and casters—the loaded King can conveniently be handled by two men.

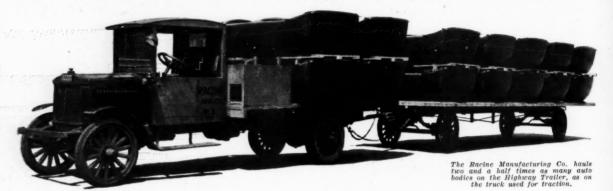
Let us acquaint you with many other advantages of this remarkable shipping case—why most of the leading Warehousemen are adapting the King method of Safe Shipping.

KING SHIPPING

THE KING SHIPPING CASE CORPORATION 376 West Water Street SYRACUSE, N. Y.

HEGHYAY EDGERTON TRAILER

The Largest Trailer Plant in the World



Instead of More Trucks, Add Highway Trailers

Save \$1900 to \$4000 in First Cost and \$3000 to \$7500 Yearly in Operation

Isn't this the business-like way to increase transportation?

Thousands of truck operators have found it so.

A Highway Trailer will add just as much haulage capacity as another truck.

And you save from \$1900 to \$4000 in first cost, according to size. Operating savings are even more important. Many firms save from \$3000 to \$7500 per year on every Highway Trailer they use. (Names and operating costs furnished on request, from firms whom we are permitted to quote.)

These are some plain advantages of a

Highway Trailer over another truck to meet added hauling requirements:

You require no extra driver. Save 90% in fuel costs. Save 80% in oil, tires, repairs, etc.

Highway Trailers are earning net profits of \$25 to \$30 a day for many operators.

It is the only trailer accepted without design change by the U. S. Army and Navy, which operate more than \$1,000,000 worth.

We are confident that an investigation will show you the advantages and profits you can secure in the use of Highway Trailers.

Write for literature or ask your dealer for a demonstration.

Note Price Advantage of Highway Trailers

Average Truck Costs	1½ Ton \$2700	2½ Ton \$3600	4 Ton \$4150	6 Ton \$5700	
Highway Trailer Costs	\$785	\$995	\$1325	\$1695	
Highway Trailer Saves	\$1915	\$2605	\$2825	\$4005	



Why do trucks slow down in bad weather?

Don't blame the engine if your trucks slow down in bad weather. It may not be the engine's fault.

Sometimes the tires are to blame. If they can't get traction they waste in slipping a great deal of the power—and time—that should be used in delivering the load.

Kelly Caterpillars are able to get traction under almost any kind of road conditions. They save the time that other tires waste in slipping. They enable the truck to stick on the job, to make its usual number of trips every day and to bring in its usual profit, regardless of the weather.

Yet Caterpillars cost very little more than ordinary solid tires and give double the average mileage.

Kelly-Springfield Tire Co.

GENERAL SALES DEPARTMENT

1710 Broadway,

New York



10

Odd, Isn't It

-that some people think of advertising as a means of benefiting only the seller, when its basic function must be to render a necessary service to the buyer, else it could not exist. Merchandise lives or dies as it does or does not meet a human need. Advertising is subject to the same law of service. The real measure of its value is what it gives, not what it gets.

In the light of these truths, the marvellous growth of advertising in itself is an impressive demonstration of its essential character in our economic system.

But you are not interested in all advertising any more than you are in all mer-

LIST OF MEMBERS

Each has subscribed to and is maintaining the highest standards of practice in their editorial and advertising service.

the state editorial and advertising ser
Advertising and Selling
American Architect
American Blacksmith
American Exporter
American Hatter
American Paint and Oil Dealer
American Paint and Oil Dealer
American Paint and Oil Dealer
American Printer

Bakers Weekly
Boot and Shoe Recorder
Brick and Clay Record
Buildings and Building Management
Building Supply News
Bulletin of Pharmacy

Bulletin of Pharmacy
Canadian Grocer
Canadian Railway and Marine World
Candy and Ice Cream
Chemical & Metallurgical Engineering
Clothier and Furnisher
Coal Age
Coal Trade
Concrete
Cotton

Cotton
Daily Iron Trade & Metal Market
Report
Distribution & Warehousing
Domestic Engineering
Dry Goods Reporter
Dry Goods Economist
Drygoodsman
Electric Railway Journal
Electrical Merchandising
Electrical Merchandising
Electrical World
Embalmer's Monthly
Engineering & Contracting
Engineering and Mining Journal
Engineering News-Record
Factory

Factory
Farm Implement News
Farm Machinery—Farm Power
Fire & Water Engineering
Foundry (The)
Furniture Journal
Furniture Manufacturer and Artisan
Furniture Merchants' Trade Journal

Gas Age Gas Record Grand Rapids Furniture Record

chandise. That is one big reason why you have a highly specialized Business Paper in your field such as the one carrying this advertisement. It was born of your needs, not of any man's desire to be a publisher.

How It Works For You

What it does for you and your field editorially is self evident, but its editorial service is just as vital. In-stead of a buyer having to depend upon gossip, hearsay and driblets of information from this or that source, he gets it all between two covers.

Timely, authoritative, comprehensive statements about needed materials pass in review as the advertising pages are turned. Confident judgments can be formed, and intelligent decisions made.

Yet advertising is NOT an added expense, but an improved distributive process, which takes the place of slower, more costly and less efficient methods.

That is why it pays to read advertising even more than it pays to advertise. Especially if you read it in papers which have met the exacting requirements of membership in The Associated Business Papers.
Inc., for one of its standards of practice requires that a paper must decline any advertisement which has a tendency to mislead or which does not conform to business integrity.

You are invited to consult us freely about Business Papers or Business Paper advertising

LIST OF MEMBERS

(Continued)

Haberdasher Hardware Age Heating and Ventilating Magazine Hide and Leather Hotel Monthly

Illustrated Milliner
Implement and Tractor Age
Industrial Arts Magazine
Inland Printer

Iron Age Iron Trade Review

Lumber Lumber Trade Journal Lumber World Review Lumber World Review
Manufacturers' Record
Manufacturing Jeweler
Marine Engineering
Marine Review
Metal Worker, Plumber and
Steam Fitter
Millinery Trade Review
Mining and Scientific Press
Modern Hospital
Motor Age
Motorcycle and Bicycle Illustrated
Motor World
Motor World
National Builder

National Builder
National Bruggist
National Petroleum News
Nautical Gazette
Northwest Commercial Bulletin
Northwestern Druggist
Nugent's, The Garment Weekly Oil Trade Journal

Power
Power Boating
Power Plant Engineering
Price Current—Grain Reporter

Price Current—Grain Reporter
Railway Age
Railway Electrical Engineer
Railway Maintenance Engineer
Railway Mechanical Engineer
Railway Signal Engineer
Railway Signal Engineer
Retail Lumberman
Rubber Age
Shoe Findings
Shoe and Leather Reporter
Shoe Retailer
Southern Engineer
Southern Hardware and Implement
Journal

Journal
Sporting Goods Dealer
Starchroom Laundry Journal Tea and Coffee Trade Journal Textile World Journal

Woodworker

THE ASSOCIATED BUSINESS PAPERS, Inc.

JESSE H. NEAL, EXECUTIVE SECRETARY

HEADQUARTERS:

220 West 42nd Street

NEW YORK CITY

Do You Know What Architects Know About Efficient Elevator Doors?

YOUR architect is a specialist you place confidence in the knowledge on which his specifications are based. Then ask him about PEELLE Counterbalanced Truckable Freight Elevator Doors.

He will tell you that PEELLE Doors last longer because of their sturdy construction. PEELLE Doors are easily operated, either manually or electrically. Their steel framed panels make them absolutely fire-proof. The truckable feature permits smooth passage of trucks into or out of elevators. Because they are vertically operated they save valuable floor space.

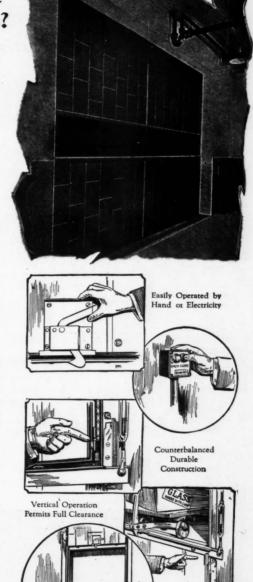
Whatever your Elevator Door requirements, PEELLE Doors are the answer to your problem.

Askyour architect!

Your copy of our new catalog, "Elevator Door Efficiency," is ready. Write for it today. The best is most imitated. Avoid imitations termed "Peelle Type," "Peelle Style," etc.

PEELLE

Freight ELEVATOR DOORS



THE PEELLE COMPANY

Stewart Avenue and Harrison Place Chicago, Philadelphia, Boston, Cleveland : : Brooklyn, New York
Canada: Toronto, Montreal, Winnipeg

The Exclusive Truckable Feature Permits Smooth Trucking Passage

Put your Elevator Door Problems up to Peelle



White Tar Paper and White Tar Naphthalene



Now is the time to lay in your supplies of-

White Tar

Paper (Pine Tar and Cedar in rolls of 12 sheets, 40x48, or continuous 50 yds. to 1000 yds. in roll).

Moth Bags (Varied Sizes).

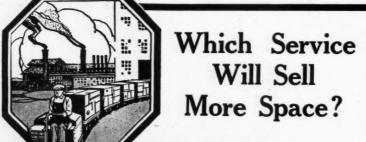
Moth Balls, Crystals, Blocks, Powder Flakes, Lavender Compound, Cedar Compound.

Manufactured by

The White Tar Company

56 Vesey St., New York, N. Y.





The most economical, safe, speedy and cleanly of the two—of course.

That is Mercury Tractor service.

Space and service are the only commodities you have for sale. And nowadays the service sells the space. Improving your service cuts the cost of handling increased business. Equip your warehouses with

MERCURY TRACTORS

and

THE TRACKLESS TRAIN

Mercury
Manufacturing Co.

4118 S. Halsted St. Chicago, Ill.





More radial

More radial movement is required "in external drive design pressure required for power transmission. The friction roll must be replaced quicker and bearing adjustments cannot be made with the external drive machine.

XUM

The Internal Drive Construction Makes This Hoist More Efficient and Cheaper to Operate

The increased efficiency comes from the fact that friction wheel and driving roll on the Standard Whip Hoist get a larger arc of contact. The increased amount of driving surface transmits more power, allows less slippage and cuts wear and tear on the two surfaces in contact.

The decrease in cost of operation comes from the smaller amount of replacement necessary and the greater amount of work obtained from use of the same amount of power under more obsolete hoisting methods.

Let us send you full details on this superior Standard Whip Hoist. We will be glad to give you sidelights on your own hoist problems. The Standard Hoist is recognized as the best equipment by the larger warehouses.

Capacities-500, 1000 and 1500 pounds.

H. J. & J. J. KING

22 Sabin Street

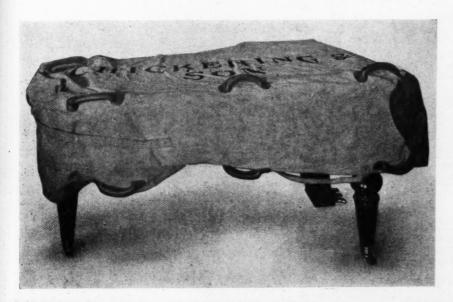
Providence, R. I.

New York-Fink-Dumont-White, Inc., 405 Lexington Avenue,

KING STANDARD -WHIP HOIST-

If You Move or Handle Pianos—Acquaint Yourself By All Means—With the BREEN GRAND PIANO COVER

"The Only One of Its Quality on the Market"



Made of good, heavy duck canvas and fleece lined throughout, substantial and wear-resisting, the Breen Grand Piano Cover affords its owner a positive protection-no chance of scratches, bruises or nicks.

The Breen—adaptable to all styles and sizes of Grand Pianos-is amply protected by leather on the butt end-has ten conveniently arranged leather handles. The cover is secured to the piano by small straps which buckle underneath.

Send for catalogue on Piano Movers' Supplies. We also make Waterproof Motor Truck and Wagon Covers.

WM. H. BREEN 219-231 RUTHERFORD AVE. CHARLESTOWN, MASS.

You have already paid for a GIFFORD-WOOD CONVEYOR

Perhaps you have paid for more than one-one that would suit your particular requirements.

If you are still sticking to the obsolete hand-to-hand method of conveying your materials from one department to another, you

Labor is high-and still climbing. Gifford-Wood Conveyors do away with a good portion of operative expense.

Labor costs are continuous. Gifford-Wood Conveyor upkeep is only a small percentage thereof.

Economical, dependable and safe, Gifford-Wood Conveyors will speed up the transfer of materials, boxes, cases, bags, etc.-will handle your merchandise with dispatch and facility-are subject to wide application in and about your ware-

Our complete Elevating and Conveying Machinery catalogue will gladly be mailed to you.

Designed and Manufac-tured by us:

Elevators—Conveyors Power Plant Coal Handling Power Plant Coal Handling
Equipment
Coal Pockets
Locomotive Coaling
Stations
Wagon Loaders
Bagging Loaders
End Thrust and Straight
Faced Hoists
Screen Chutes
Buckets Buckets

MAIN OFFICE AND WORKS BOSTON.





Scratch Remover

he M.L.Campbell Co

Magic

Our Expense Write for a dozen or half dozen Magic Scratch Removers sent by prepaid Parcel Post on approval. Touch any scratch on approval.

furniture with the Magic Brush and it vanishes. After 10 days' trial, if not satisfactory return them at our exense, otherwise remit \$5 for the dozen or \$2.60 for 1/4 dozen.

Campbell's Quick Refinishing Outfit on Free Trial

Permanent repairs easily made with this outfit at saving in refinishing expense. The Amber Glaze removes packing marks, the Ethereal Varnish fixes rubbed through marks, and the Stick Shellac fills deep holes. In fact, you can fix a damage to any kind of finish. Order an outfit. If pleased send us \$10, otherwise return unused portion at our expense. Write us today.

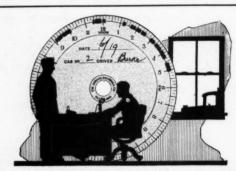
The M·L· CAMPBELL· COMPANY



PRODUCTS

708 EAST 1918 STREET

KANSAS CITY, MISSOURI



Better Team-Work Between Truck-Owner and Driver

HE Service Recorder brings many a fleet superintendent and driver to that better understanding which pays big dividends in truck operation.

A fleet manager without a full knowledge of the handicaps of awkward routing and loading delays may unjustly blame the driver for the truck's poor showing. On the other hand, the driver may lack a full realization of the staggering costs of curb-side chats and other avoidable though seemingly trivial delays.

A frank discussion of the Recorder charts (which register every truck movement every minute of the day) clears up all misunderstandings and brings to light dozens of ways of increasing efficiency and truck profit.

Let us record just one day's truck operations. We will leave it to your analysts of the chart whether you can afford to operate without a Servis Recorder on every truck you own or manage.

The Service Recorder Company - Cleveland

SERVIS RECORDER

Keep Your Men Busy

Idle men are a loss. Between trips or on dull days they could effectively operate a carpet cleaning depart-

You haul and store carpets and rugs -why not clean them, too? The space required is small and only a slight increase in investment is necessary.

ONNERSVILLE

CARPET CLEANING EQUIPMENT

A Connersville scrubbing machine and a centrifugal type Connersville vacuum cleaner are the essential parts of your equipment.

The scrubbing machine gently shampoos the rugs, dissolving all stains and grime and the vacuum cleaner picks up the suds and dirt, leaving the rugs practically dry.

Quality work done quickest and best is assured by using Connersville equipment.

LANDERS, FRARY & CLARK

United Vacuum Appliance Div.-Dept. I. INDIANA I **CONNERSVILLE**



Scrubbing Machin Vacuum Cleaner

MAISH QUALITY WAGON PADS



Solve Your Delivery Problems

We use an extra heavy grade of khaki brown covering in making Maish Quality Wagon Pads. They are soft, smooth, long-wearing.

Workmanship is unsurpassed. The filling is an extra thick one-piece layer of cotton (no shoddy). The quilting is in close rows of stitching with heavy carpet thread. Our own special process is used in binding edges. Every seam is protected and ripping is thus avoided.

You may return Maish Quality Wagon Pads at our expense if you are not fully satisfied.

MADE IN THREE STANDARD SIZES:

No. 10 (Small size) Cut Size of Cloth 36x72 No. 20 (Medium size) Cut Size of Cloth....54x72 No. 30 (Large size) Cut Size of Cloth.....72x80

Prices on request.

The Chas. A. Maish Co.

Makers of the World-famous Maish Comforts

1129 Bank Street

Cincinnati, O.

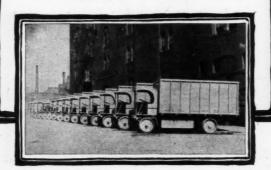


YOU wouldn't leave your headlights burning in the daytime. Why use a truck that runs when it stops? The Walker motor stops when the truck stops -starts only when the truck starts-one of 12 Walker economies that make up "lowest trucking cost."

Walkers keep the road-no matter what the weather conditions. Records kept by large fleet owners show minimum "time out." Simple control, silent operation and quick pick-up make driving easy and drivers contented. The simple Walker "Balance Drive" with only 10 moving parts utilizes practically all the power and gives the Walker 10-20 years of profitable working life. Let us show you how Walkers will work for you at 50% to 75% of your present trucking costs. Write today.

WALKER Electric TRUCKS LOWEST TRUCKING COST

WALKER	AMERICA'S
VEHICLE	LARGEST
COMPANY	MANUFAC-
CHICAGO	TURERS OF
NEW YORK	ELECTRIC
BOSTON PHILADEPHIA	TRUCKS &
BUFFALO	TRACTORS



EXCELSIOR PACKING PADS ARE LIKE INSURANCE

VOU pay only a small premium charge for the best protection obtainable. Don't think of them as an expense, consider the loss and inconvenience of claims for damage and the satisfaction of knowing that anything you ship will reach its destination exactly as it left your hands. You will incur no obligation by getting our samples and prices.

SELLE & CO.

Manufacturers

1000-1016 N. Halsted St., CHICAGO, ILL.



With Help Scarce AND Wages High NOW Is the Time when the need for our LABOR-SAVING SPIRAL CHUTES VERTICAL LIFTS AND MERCHANDISE **CONVEYORS** is imperative

> Owned by The Haslett Warehouse Co., of San Francisco, the development of handling

problems in our own fourteen general merchandise storehouses has enabled us to give practical advice to ware-house and terminal concerns. We are at your service. Through long experience we have learned how to combine every form of merchandise conveyor so as to obtain the most practical results.

When no standard form of conveyor is adequate, we design special machines.

When you want information on conveyors, write us.

We can help you.

The Haslett Spiral Chute Co.

Factory: 510-512 N. 61st St., Philadelphia, Pa. New York: 110 West 34th St. Southern Office: 523 Calvert Bldg., Baltimore, Md. Pacific Coast: 228 Pine St., San Francisco, Cal.

OPPORTUNITY

Transfer and Storage men are, by training and profession, transportation and haulage experts. They have the knowledge and the experience to make them the best motor truck distributors of any body of American business men. The question arises:-Have they the courage to take advantage of an opportunity to make profits from their specialized knowledge, by engaging in a line of business which is allied to their own?

Opportunity, they say, knocks but once at every man's door. Some men are alert enough to grasp the chances that Fate offers them; to develop the start they secure by being wide-awake, and the public calls them lucky.

You hear men wailing about the "time I could have had the So-and-So Agency," bewailing the fact that he does not have it now and wondering how the "lucky" holder managed to get it.

There is not so much "luck" as judgment, perseverance, and the courage to enter a field of work which promises adequate rewards for industry. An opportunity for men who are "awake" exists now.

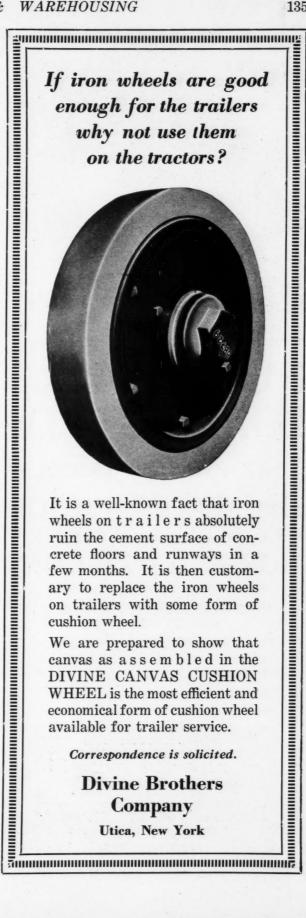
We Have Openings for a Number of Transfer and Storage Men As Our Distributors-Some Territory Open Now Which May Never Be Vacant Again-Now Is Your Time.

Address Sales Manager

J. C. WILSON COMPANY

Detroit, Mich.

Manufacturers of Wilson dependable Motor Trucks





FURNITURE LOADING PADS

AT PRE-WAR PRICES

also WATER PROOF COVERS for TRUCKS HORSES & WAGONS

PHONOGRAPH COVERS
TABLE TOP PADS
LAMP PADS
CHAIR PADS
BED HEAD AND FOOT PADS
FEED OR NOSE BAGS
COAL BAGS
LAUNDRY BAGS
PIANO COVERS
FLOOR RUNNERS
ROLL WIDE CANVAS
RADIATOR COVERS
AT PRE-WAR PRICES

Detroit Canvas Company

245-47 Larned St., East DETROIT, MICH.



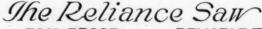
New Hebard Warehouse at 6331-33 Broadway, Chicago. Geo. S. Kingsley, Architect

Fireproof Storage Warehouses Designed, Constructed and Financed

GEORGE S. KINGSLEY

ARCHITECT

109 N. Dearborn St., Chicago



TOOL TROOT

- RELIABLE

Designed Mr. Warehouseman

NEAT

COMPACT

and

RIGID

SAVES

TIME, STRENGTH

SPACE AND

EXPENSE

TELL US

Kind of Current

Supplied to You.

Ceiling Height in

Your Boxing or

Crating

Department.

THAT'S ALL.

We'll do the Rest.

TH ST

Watch Us Grow.

JACKSON'S EXPRESS & VAN CO.

CHICAGO FIREPROOF STORAGE CO.

PIONEER FIREPROOF STORAGE CO.

Ask the above Co. what the results are. We will get your order.

Mfd. by

The Kaetker Saw Machine Co. CINCINNATI, O.

Formerly The Reno-Kaetker Electric Co.



Repair Parts for Jumbo Trucks Average Less Than \$10 a Year

The total cost of repairs for all Jumbo Trucks has averaged less than ten dollars per year per truck. Balance is responsible for this remarkable record spread over a period of years.

able record spread over a period of years. In a truck of theoretically perfect balance, all parts should wear out at the same instant—no breakage. Here's proof that Jumbo Trucks are as near perfectly balanced as is humanly possible; many Jumbo owners with records of 20,000 to 30,000 miles have not spent a cent for repair

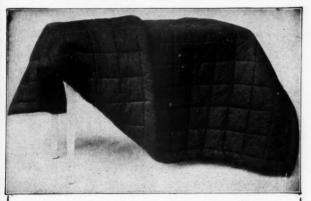
parts.

This Jumbo balance is the result of long, painstaking study of every part under difficult operating conditions. changing sizes and materials until each part, no matter how small, is strong enough for any emergency—yet without excessive bulk or weight. Jumbo Trucks are built in 10 models with 6 capacities—1½ to 4 tons—a model for every haulage need.

Write Today for Catalogue

NELSON MOTOR TRUCK CO., Saginaw, Mich.





BELOW ZERO, and a Howling Blizzard.

Winter weather complicates the delivery problem. Most claims for damaged goods are made when sleet and snow prevail.

The "Protecto" Wagon Pad

not only delivers your furniture without a scratch, but gives it absolute protection from the elements.

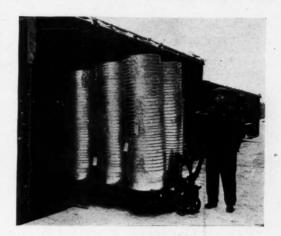
Made of heavy twill denim, cotton filled. Note especially that the pad is stitched in square blocks preventing the cotton from bunching. Pads at these special prices afford cheap insurance against damage.

No.	12	Cut	size	of	cloth	72	x	80\$3.50	each
No.	14	Cut	size	of	cloth	54	x	72\$2.35	each
No.	16	Cut	size	of	cloth	36	x	72	each
Pho	nogr	enh	COVO	PE					each

CHICAGO QUILT MFG. CO.

1133 Roosevelt Road

Chicago, Ill.



From Car to Consignee With One Handling

At the Security Warehouse Co., Minneapolis, they have been cutting handling charges for years.

For instance, in this case, a carload of tubes is unloaded by placing the tubes on a wooden platform in the car. The Jacklift is slipped under the loaded platform and picks up load and all.

It is placed in storage and the load left on the inex-It is placed in storage and the load left on the inex-pensive platform until reshipped with only one handling. You can handle many other kinds of loads, if not all, with the Jacklift. And every load so handled is cared for at greatly reduced cost, to say nothing of the smaller outlay for equipment. With Jacklifts and plat-forms you get 100 wheel trucks at from \$6 to \$8 per

Scores of warehouses are using Jacklifts in this way all over the country. You can't afford to figure out how you can't use them. Let us show you how you can. Let's start something, by dropping us a line means no obligation.

> Don't confuse our Jacklift with the ordinary elevating truck. It is more, because it Lifts Higher — Easier — In Less Space and stands the gaff

Lewis-Shepard Company 581 E. First Street Boston 27, Mass.

Offices in the principal cities



DRY STORAGE

COLD STORAGE

M. R. CARPENTER

ARCHITECT and REFRIGERATING ENGINEER

72 West Washington Street

Chicago

A Good Start Leads to a Good Finish:

Preliminary plans are important and should be thoroughly considered.

My services are of value to you from start to finish.

No charge for consultation.

BARNETT

Canvas Goods for All Purposes

Cotton Duck, all Widths and Weights Cheese Cloth

Barnett Canvas Goods & Bag Co. 41 N. 11th St., Phila., Pa.

FURNITURE PADS

Made of Durable Colored Canvas

STOCK SIZES:

36" x 72" 50" x 72" 75" x 72"

Burlap, Waterproof Tarpaulins, Bags, Etc.

FULTON BAG & COTTON MILLS, Inc.

330 WYTHE AVE., BROOKLYN, N. Y.

lished 1870 Phone: Greenpoint 4200 Branches: Atlanta, St. Louis, New Orleans, Dallas Established 1870

More efficient-less expensive-better distribution than Anybody can operate them-any timeelevators.

VOLNEY W. MASON &

Established 1860 Telephone, Gaspee 1211 Incorporated 1902 PROVIDENCE, R. I., U. S. A.

Address all communications to us

Patent Whip Hoists

New Bedford Storage Warehouse Co., New Bedford, Mass. Borden Condensed Milk Co., New York Terminal Warehouse Co., Prov.,R.I.
National Dock & Storage Co., East
Boston, Mass.
New York Dock Co., Brooklyn, N. Y.
Crimmins & Peirce, Boston, Mass.
Torminins & Peirce, Boston, Mass.

For Mills, Docks, Cotton and Woolen Warehouses, etc. EXPRESS SERVICE—200-400 feet per minute SEVERAL THOUSAND IN USE FRICTION PULLEYS AND CLUTCHES

It Will Pay To Look Into This

Any ? Will Receive Prompt

Reply

1500 lb. Whip in Pent House of The Charles River Stores, Beverly St., Boston, Mass. Sizes-500 lb., 1000 lb., 1500 lb., 2000 lb.

KILL RATS

New Way

In France the World's great-

In France the World's greatest laboratory has discovered
a germ that kills rats and
man beings, dogs, cats, birds, chickens or pets. Quickly
clears dwellings and outbuildings, with no offensive
after-effects. It is called Danysz Virus.

Free Book Get our free book on rats and mice, telling about VIRUS and how to get some.

H. M. Virus, Ltd., 121 West 15th St., New York



BUXKIN FURNITURE PADS

Strong Khaki Canvas, Stitched Both Ways 18 x 72 36 x 72 54 x 72 THE N. Y. TENT & TARPAULIN CO.
Successors to Tent Dept. of Foster & Stewart Co.
388 ATLANTIC AVE.
BROOM BROOKLYN

WAREHOUSE EQUIPMENT

WE MEET YOUR REQUIREMENTS

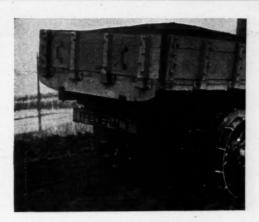
IN

Furniture Pads, Canvas Covers, Piano Covers (for shipping and storage), Tarpaulins, Truck, Wagon, Horse and Talking Machine Covers.

SAXOLIN Duplex is a flexible packing, wrapping and case-lining material. Better than burlap because it is Vermin-proof, Water-proof and costs less.

Write Us Your Requirements So We May Quote You Prices

The Cleveland - Akron Bag Co.
Cleveland, Ohio



Equip Your Trucks With FOLEY TRACTION RIMS

(Now Made for Ford Pneumatics)
100% TRACTION ON ANY ROAD

Foley Traction Rims for all solid tire wheel sizes and for Ford pneumatics give absolute traction in sand, mud and marshy spots. The lugs clear the road on hard surfaces, but come into play as soon as soft spots are encountered. Their action is positive, and stalling and wheel spinning is unheard of with Foleys on the job.

FOR SOLID AND FORD PNEUMATIC TIRES Send for literature illustrated and descriptive.

FOLEY TRACTION RIM CO.

827 Hennepin Ave.

Minneapolis, Minn.



Furniture Van Pads With Super Strength

Reach pads are made of an extra thick layer of cotton sewed between a covering of very heavy ticking fabric. They are so constructed that they will stand up under unusually hard service.

The edges are reinforced with heavy tape and will not fray out or tear apart. The double stitching makes them the strongest furniture van pads you can buy.

All prices quoted here are for finished sizes.

 74 x 68
 \$4.45 each.

 52 x 68
 \$3.35 each.

 36 x 68
 \$2.25 each.

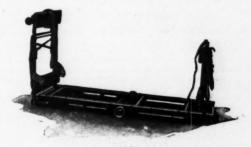
Padded Phonograph Covers, \$8.75 each. We also manufacture Canvas Padding, extra heavy for lining the sides of auto trucks; Tarpaulins, plain or water proof. Specify measurements desired.

A. L. Reach Textile Co.
19-21-23 West 18th Street, New York City

A TRIUMPH is your

BUCKEYE SILL PIANO TRUCK

says an owner of four of them



End Truck Covers Straps

Self-Lifting Piano Truck Co. Findlay, O.

G. W. Jones Lumber Co.

CHICAGO

Manufacturers of CRATING AND BOXING LUMBER OF ALL KINDS

We refer you to the leading warehouses in Chicago as to the quality of stock we ship.

Wholesale Prices

Stock Guaranteed

Excelsior Wrapper Co.

MANUFACTURERS OF

Excelsior Packing Pads Wood Wool Baled Excelsion

> CHICAGO OFFICE 224 W. Kinzie St.

> > FACTORIES:

Sheboygan, Wis.; Grand Rapids, Mich. METROPOLITAN DISTRICT SERVED BY Boston Excelsior Co. 560 W. 29th St., New York City

Furniture Loading Pads

Size 68 x 80, made of good, strong khaki brown drill, straight stitched; weight, one hundred pounds per dozen. Price \$30.00 per dozen, F.O.P. Louisville.

A. Marks Company

721 West Market St.

Louisville, Ky.

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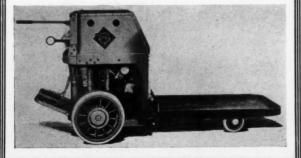
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